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Purchasing Power Guarantees for Deferred Payments

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A MEASURE INTRODUCED in Finland in May 1955 appears to be one of the first steps taken by a banking system to introduce, in its pure form, a device that has long been advocated by theoretical economists. Most savings banks in Finland introduced at that time a new form of time deposit for their customers. In future, money could be deposited for one year, and at the end of the year the bank would undertake to credit the account with the amount that the cost of living index indicated was necessary to restore the account's original purchasing power.[1] The account would bear 4¾ per cent interest, 1½ per cent below the prevailing rate on deposits without the purchasing power guarantee. Since this step was taken at a time when there was, in other countries, a rising practical interest in the device, it seems useful to re-examine closely the advantages claimed for such an arrangement and to study the practical problems and fears that have made such experiments rare.

The theoretical support among economists for a purchasing power guarantee for deferred payments is most impressive. Marshall in 1886[2] strongly advocated the use of a standard unit of purchasing power in contracts for deferred payments, and reaffirmed this view in 1911.[3] Jevons[4] even earlier thought so much of the proposal that he suggested that it be made compulsory, after a short transition period, for "every money debt of, say, more than three months' standing [to] be varied according to the tabular standard"[5] of purchasing power. Keynes[6]

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[1] The exact provisions are reproduced in Appendix I.

[2] In his Reply to the Royal Commission on the Depression of Trade and Industry, 1886, reprinted in *Official Papers by Alfred Marshall* (London, 1926), pp. 9–12. The proposal is also set forth in an article in the *Contemporary Review*, March 1887, reproduced in *Memorials of Alfred Marshall* (London, 1925), pp. 188–211.

[3] In a letter to Irving Fisher, reproduced in *Memorials of Alfred Marshall* (London, 1925), p. 476.

[4] W. Stanley Jevons, *Money and the Mechanism of Exchange* (New York, 1898), Chap. XXV, "A Tabular Standard of Value," pp. 318–26. (First published in 1875; page references are to the New York edition published in 1898.)

[5] *Ibid.*, p. 324.

[6] In evidence before the Committee on National Debt and Taxation (Colwyn Committee), *Minutes of Evidence* (London, 1927), Vol. I, pp. 278 and 287.

advocated the issue by the U.K. Treasury of "bonds of which the capital and interest would be paid not in a fixed amount of sterling but in such amount of sterling as has a fixed commodity value as indicated by an index number." More recently, the proposal that the U.S. Government should issue a bond whose value would be guaranteed in terms of purchasing power was enthusiastically supported by such eminent economists as Milton Friedman,[7] Fritz Machlup,[8] and Sumner Slichter.[9] Economists in some non-English-speaking countries have also supported the concept. In France, Courtin,[10] Gael Fain,[11] and Sauvy[12] have proposed purchasing power clauses of various forms to meet current French problems. In Latin America, Javier Márquez has urged the widespread use of guaranteed purchasing power bonds to secure additional resources for development.[13] In China, S.C. Tsiang[14] supported the use of an indexed savings certificate to overcome some of the disadvantages of the inflation.

In financial circles, on the other hand, the weight of opinion has been overwhelmingly against this "artificial" device. Jevons' arguments were rejected by Bagehot.[15] Keynes' proposal was dismissed by Sir Otto Niemeyer[16] of the Bank of England with the assertion that no one would be interested. More recently, the case made in the United States by some economists before the Patman Subcommittee was attacked vigorously by business economists and in the replies of the Treasury[17] and the Council of Economic Advisers.[18]

[7] Joint Committee on the Economic Report, *Monetary Policy and the Management of the Public Debt* (82nd Congress, 2nd Session, Washington, 1952), Replies to Questions . . . for the Use of the Subcommittee . . . (Wright Patman, Chairman), p. 1105.

[8] *Ibid*, p. 1106.

[9] In "We Can Win the Economic 'Cold War,' Too," *New York Times Magazine* (New York), August 13, 1950, pp. 7, 22–26, and in later letters and addresses. His proposal began the discussion leading to the examination by the Patman Subcommittee. A thorough theoretical analysis of the proposal with a favorable conclusion is given by Richard Goode in "A Constant-Purchasing-Power Savings Bond," *National Tax Journal* (Lancaster, Pa.), December 1951, pp. 332–40.

[10] According to *Le Monde* (Paris), May 23, 1954, he proposed the use of the cost of an hour's unskilled labor as an index for loans.

[11] *La Lutte contre inflation et la stabilisation monétaire* (Paris, 1947). A price index deflation is suggested.

[12] *L'Observation Economique* (Paris), October 1949, p. 7. The issue of bonds by public utilities denominated in terms of the selling price of their product is advocated.

[13] Javier Márquez, "Bonos de Poder Adquisitivo Constante," *El Trimestre Económico* (Mexico, D.F.), January–March 1954, pp. 6–43.

[14] *Economic Review* (Shanghai), April 6 and May 10, 1947.

[15] Walter Bagehot, "A New Standard of Value," *The Economist* (London), November 20, 1875. Reprinted in *The Economic Journal* (London), Vol. II (1892), pp. 472–77.

[16] Committee on National Debt and Taxation, *op. cit.*, p. 633.

[17] Joint Committee on the Economic Report, *op. cit.*, pp. 142–45.

[18] *Ibid.*, pp. 888–89.

The weight of financial opinion has been shown as impressively in the lack of practical application—at least until recently. There are still only a few scattered examples of the use of the device in its "pure form," i.e., using a price index to measure the adjustment needed to assure a contract with stable purchasing power.[19] Even before the use of the clause by banks, Finland provided the broadest application. Government securities with a partial purchasing power guarantee based on price indices have been issued there since 1944. During succeeding years, a range of private securities with similar clauses, which have also been used in some private mortgages, has been issued. In Sweden in 1952 a large cooperative, the Kooperativa Förbundet, issued a bond with a partial guarantee. In the United States there was an early official application of the index principle in Massachusetts in the "equity bills" of 1742 and the "Massachusetts depreciation notes" of 1780, both based on the aggregate price of a few items.[20] An interesting modern application using a full index number was made in 1925 when the Rand Kardex Company, at the instance of Professor Irving Fisher, issued a 30-year bond with interest and principal linked to the wholesale price index. The U.S. Government in 1946 accepted a contract in which payments were determined by the movements of a cost of living index.[21] In Mainland China, time deposits with a guarantee related to an index based on the prices of a few major commodities were allowed during 1950–52. Official proposals for security issues with an index guarantee have been made in Chile and Israel.

The device in a form less precise than that which involves the use of a price index has been much more widespread. In many Latin American countries, deposits in domestic banks may be denominated in U.S. dollars, a device intended to have the effect of stabilizing their purchasing power. In France the Pinay Loan of 1952, providing repayment guaranteed at a price related to the free market rate of the napoleon, was another variant. This loan was followed in France by issues of semi-governmental corporation bonds which had their purchasing power guaranteed by reference to the average price received for the corporation's product. Thus the Coal Corporation issued a bond repayable at a price related to the wholesale price of coal; railway bonds were related to the price of a third-class railroad ticket for one kilometer;

[19] In Appendix I, the details of several of the more important applications are given.

[20] W. C. Fisher, "The Tabular Standard in Massachusetts History," *Quarterly Journal of Economics* (Cambridge, Mass.), Vol. 27 (1912–13), pp. 417–61.

[21] The U.S.-Cuba Sugar Agreement of 1946 provided that the price paid by the Commodity Credit Corporation for Cuban sugar should be linked with the monthly indices of the U.S. Bureau of Labor Statistics. The text is quoted in Arthur Nussbaum, *Money in the Law, National and International* (Brooklyn, 2nd ed., 1950), p. 305, footnote 32.

and those of the Electricity Board were tied to the price of a kilowatt hour. In Austria there was a similar issue by the electricity authority.

In many countries and over periods stretching far back into history, there have been many arrangements tying payments to specific prices. Jevons[22] recalled the way in which the colleges of Oxford and Cambridge were obliged by law to lease their lands for corn units, which had the effect over the long period of maintaining the purchasing power of their endowments. Marshall[23] referred to the payment of tithes being related to average prices of wheat, barley, and oats. In the German Republic of 1919–23, the price of rye was widely used as a deflator for contracts of all types. Gold clauses have been common in many countries, and they show a remarkable persistence in the face of many legal obstacles. In Greece, particularly, there is widespread use of the gold sovereign as a unit of account in spite of a law making the gold clause unenforceable.

Price indices have been widely used in the related sphere of wage contracts. Both in private arrangements made between a trade union and individual employers and in public arbitration, the insertion of a cost of living clause has become quite normal. Even when no such clause is formally included, the relationship between wages and cost of living is normally in the forefront of any negotiation to such an extent that, in times of rising prices, it almost invariably is the basis on which negotiations begin.

In the following discussion, attention will be centered on the use of purchasing power guarantees in a rather narrow sense. There will be no discussion of their application to wage contracts or pension arrangements. Attention will be focused on the denominating of debts, either private or governmental, in a form which provides that final payment be varied in accordance with an index. Only indirect reference will be made to guarantees under which the return is related to gold, dollars, or the price of the debtor's product.[24]

Theoretical Basis for Purchasing Power Guarantees

The importance of the economic consequences for the economy as a whole of the adoption of purchasing power guarantees would, of course, depend on the range within which these guarantees were applied. The effects of their application in a single transaction or by a single firm

[22] W. Stanley Jevons, *op. cit.*, p. 319.
[23] *Memorials of Alfred Marshall* (London, 1925), p. 197.
[24] In Appendix II, the form of the guarantee is discussed in detail and the merits of various indices are analyzed.

would be almost negligible. At the other extreme, it has actually been suggested that the inclusion of a purchasing power clause should be made compulsory in all contracts.[25] Some of the opposition encountered by supporters of purchasing power guarantees may, indeed, have been in part a reaction against such a sweeping proposal, which in any event clearly goes too far. Even if purchasing power guarantees were widely used, it might still be more advantageous, for many purposes, to write contracts without them.

Proposals for the use of purchasing power guarantees in loan contracts are based directly on the observed uncertainty about the future value of money. The whole subject would be dropped immediately if it could be established that the value of money—i.e., the general price level—was definitely stabilized. Any practical proposals are therefore predicated on the assumption that, for the country in question, there is uncertainty about future general price movements.

Private debts

The problem which purchasing power guarantees are intended to solve is shown in its simplest form in the settlement of a private debt. When a businessman borrows, he necessarily undertakes one risk, i.e., that he will be able to invest the funds economically in his own business. This is a risk which his judgment and knowledge of his business make him well fitted to bear. But he also undertakes another risk, i.e., on future movements of general prices. This element of uncertainty is wholly unrelated to his ability as an investor in a particular line of business. If the general price level rises, he is given an unwarranted gift. If it moves down, he is subject to an unjustified penalty. There is, in consequence, an element of gambling when borrowing is in terms of money, and this can reduce significantly the efficiency of a private enterprise system. Instead of systematically weeding out inefficient investors and encouraging only the efficient, a wholly arbitrary selection occurs with the general movement of prices. Marshall aptly compared this with the inefficient adjudication of land frontage in olden times.[26] Decisions then were based on measurements made by the judge actually stepping the distance, heel to toe, and the variation in the length of the judge's foot made the outcome unpredictable. This unnecessary uncertainty was overcome by the better definition of a unit of length; similarly, it is claimed, the arbitrary element in contracts resulting from general price movements can be overcome by use of purchasing power clauses.

[25] W. Stanley Jevons, *op. cit.*, p. 324.
[26] *Memorials of Alfred Marshall* (London, 1925), p. 193.

The problem of uncertainty about the future course of prices is not identical with the problem of inflation. With inflation, however, the range of possible price movements is so increased that the problem of uncertainty is much accentuated. Consequently, it is primarily in countries which are suffering from inflation or have a history of inflation that the purchasing power clause should be given most attention.

To illustrate the problem a little more precisely, let us take a country with an active mild inflation. For simplicity, let us assume that the price expectations of everyone are the same. If prices were stable, a borrower in this country might feel that he could invest funds satisfactorily and pay 10 per cent for the money. However, if he should expect prices to rise—let us assume an expectation of a 20 per cent price increase with a considerable feeling of uncertainty about the actual outcome—he would be willing to pay more than 10 per cent, but it is quite improbable that he would go so far as to offer 32 per cent. If he should offer 32 per cent and prices rose by only 10 per cent, he would lose heavily and might be put out of business by the high interest payments. He probably would offer no more than 20 per cent, and even then he might feel somewhat unhappy about the gamble he was taking. On the other hand, the lender might not regard even the payment of a rate of 32 per cent as equivalent to a 10 per cent real return. He normally would fear the possibility of a greater rise in prices more than he would value the possibility of a lesser rise; in other words, he would prefer a certain outcome and would be ready to pay some insurance premium for it. Therefore, when faced with an offer of 20 per cent for interest when he expected prices to rise by 20 per cent, he would feel quite reluctant to carry out the transaction. He would make a comparison with alternative direct outlets for his savings—buying real estate, obtaining foreign currency, or buying inventories of goods. With his price expectation, the alternatives would seem good even if they should yield no return other than the hedge against inflation. Moreover, consumption would tend to increase for there would be no reward to offset the usual preference for present goods. The funds he would make available to the borrower would be reduced, and the borrower would have to restrict his operations. The economy as a whole would lose as productive investment was cut back in favor of consumption and direct, less productive, investment in inventories, foreign currencies, and real estate. The loss would be due directly to the defective standard of values in the loan investment—use of money terms in loan contracts injecting a stultifying element of cost separating the borrower from the lender. In extreme cases, the standard would be so inefficient that loan operations would take place without a common medium; such

operations would be almost as cumbersome as were barter transactions before the introduction of money.

If the contract were made in terms of stable purchasing power, the obstruction to investment would be removed. The borrower with a contract to pay back at the end of the year an amount of money determined by the general movement of prices would be free to offer the full 10 per cent he believed he could earn. If prices should fail to increase as much as he expected, then he would suffer no loss, since his contractual repayment would fall. If prices should rise more, then he would still not be in difficulty, for his investment would increase equally in value, giving him the extra profits needed for repayment. The lender confronted with a real 10 per cent yield would find the sterile alternatives of increasing consumption or purchasing real estate, foreign currency, or inventories much less attractive and would raise the amount he offered for lending. The country would gain both from the improved distribution of savings and the consequent greater productivity and from the increase in total savings and investment.

In countries suffering from inflation, the improvement in the lender-borrower relationship would also be strengthened, since, with a purchasing power clause in the contract, the stigma of usury that would attach to any attempt to insist on high nominal rates of interest in order to ensure a proper real return would be avoided. The purchasing power clause might imply a money rate of interest of 54 per cent when prices rise by 40 per cent, but it could not be characterized as usurious. As debt contracts could thus more easily be adapted to the requirements of both borrowers and lenders, the use of private savings would be broadened and the volume of savings increased, thereby accelerating the creation of a well-developed economy.

The legal and social sanctions against usury in money terms give rise to a paradox in discussing the use of a purchasing power clause. The analytical discussion seems to show that, if anything, the borrower would gain more than the lender from the use of the clause—simply because interest payments are likely to be larger relative to his net income, and to have their real value stabilized would have a greater stabilizing effect on real income. Yet it is apparent that in a country with even a mild inflation the borrower in fact would seem to gain from the conventional form of contract, and that in comparison with the lender he would be the one reluctant to change to a purchasing power clause. The explanation lies in the interest rate enforced by law or social custom—an interest rate that does not clear the market but instead forces the lending agency to work out some form of rationing of credit. The borrower who receives a loan does not pay a full market price for

it, and he gains in comparison with a purchasing power loan in which he pays a competitive rate. The existence of this "gain" is, of course, no evidence at all that borrowing would not be more efficiently organized on a purchasing power basis. The theoretical advantage of the purchasing power clause, with the greater flow of funds that it is likely to ensure and the competitive determination of their direction, is simply the advantage of a price system over an allocation system.

Government debts

The advantages of the purchasing power clause in government securities are, of course, similar to those in private contracts, but the relative importance of the arguments is changed substantially. The prime economic consideration is simply the increased flow of funds that the clause might ensure. By offering a certain return in real terms, the government can effectively compete with the alternative direct hedges which the investor might consider. In comparison with a higher money interest rate (the possible alternative method of obtaining extra funds voluntarily), the purchasing power security is attractive to the saver as it always has the extra insurance of preserving the return if there should be a runaway inflation. From the government's side, the advantage over a higher interest rate is also considerable. The government gains, just as a private business does, if its outpayments move with its receipts. In particular, a government borrowing under inflationary conditions would find the high interest payment burdensome if it succeeded in limiting price increases. The advantage of a purchasing power clause is particularly great for a government when the borrowing in this form is undertaken as part of a strong price stabilization program after a period of rising prices. At that time, the public is likely to expect further price increases and a purchasing power clause will be very attractive, while if the program is successful it will cost the government nothing.

Furthermore, a purchasing power clause in government securities circumvents the prestige problem. Simply for prestige reasons, a government is always unwilling to pay a high nominal rate in money terms. Therefore, in practice, the government in a country with significant price increases normally has paid less than the rate of the price increases; this makes the real return on government bonds negative and naturally inhibits the flow of savings. A purchasing power clause would enable the government to float loans at respectably low interest rates and at the same time insure a net real return to the investor.[27]

[27] There would possibly be substituted another prestige problem, i.e., the implication that, in resorting to loans with a purchasing power guarantee, the government's credit is weak. However, this would not seem a valid implication in view of the use of such clauses by the Finnish Government and French governmental institutions, and of the proposals for its use by the U.S. and U.K. Governments.

Under some circumstances, the purchasing power device might have the advantage of lowering the cost of existing borrowing. The argument, as advanced by Keynes, is that the Treasury gains from adapting its issues to the desires of the investing public. He cited the gain achieved by issuing both short-term and long-term securities, thereby tapping different markets and enabling the borrowing to be done more cheaply than if one market alone had to absorb the total borrowing. Since some people desire the security of guaranteed purchasing power, the Treasury, by adapting its securities to this preference, can lower the over-all cost of borrowing, the new securities having a lower yield than existing ones. This argument is clearly valid if significant inflation is avoided for the life of the securities. However, its general validity is very doubtful, for it is apparent that in many countries inflation has reduced to zero the real return on government securities. It is quite improbable that investors would recognize this openly by accepting a purchasing power bond with a negative yield, and hence the Treasury could not lower its average cost. Keynes to some extent recognized this objection, and attempted to meet it by ethical considerations, saying that, of course, the Treasury could gain by expropriating investors by severe inflation, but he assumed they would not wish to consider this as legitimate.

Control of inflation

The advantages of the purchasing power clause are that a stable standard for deferred payments would enable the members of a community to satisfy their desires more efficiently than under the present money standard. It is normally understood that one consequence of the improved standard, with its higher return to savers, would be increased voluntary savings. From this has sprung the hope that the device has an important place in limiting inflation. This hope has usually been accorded a central place in any argument in favor of the use of the clause; but its value for this purpose can by no means be indicated simply, and even with extended analysis the result is still open to conjecture.

It is fairly clear that an addition to savings is to be expected from the widespread application of the purchasing power clause. Use of the clause would assure savers, particularly in a country with a history of inflation, a return which they would value more highly than that available to them on fixed money interest obligations. To the extent that greater rewards bring higher savings, total savings would be increased. It is, of course, not proven that this positive relationship always holds. In particular, an argument used against it is that the capital loss suffered in an inflation by the holders of fixed money obligations stimulates them to save more to rebuild their assets. However, this perverse reaction to higher returns seems likely to be the exception rather than the

rule. The increase in effective savings seems likely to be significant, especially where the greater return on loans through a purchasing power clause is able to induce a significant substitution for sterile savings in the form of gold and foreign currency.

The whole of the increase in effective savings would by no means necessarily be a factor in reducing the inflationary gap. Many offsetting increases in expenditure would nullify its effect. Insofar as the increase in savings is stimulated by the issue of private securities with a purchasing power clause, the extra savings would flow to private investors and have little deflationary impact. Spending would be merely changed from spending on consumption to spending on investment. The switch would assist only indirectly in the control of inflation. It would make it easier for the central bank to control the money supply, for the increased savings to be expected would diminish the pressure to expand bank credit. It also might permit some reduction in the program of government investment if part of the essential capital growth were provided from private sources. Further, by introducing a competitive (higher) interest charge, free of the restraints arising from fears of usury, the use of the clause might reduce the clamor for loans which frequently renders ineffective the government's campaign for tighter credit.

Equally, if the increased savings should flow to the government through sales of official securities with a purchasing power clause, there might be some offsetting increases in expenditure. If the proceeds of the securities were allocated to a particular public enterprise, it is not improbable that the investment program might be expanded, and thus part of the anti-inflationary impact of the savings might be neutralized. Even if the receipts should flow to the government as a whole, expenditures might rise. Many governments have absorbed far greater increases in receipts originating in increases in the prices of exports and yet, as they were at the same time increasing expenditures, they have not narrowed the inflationary gap. It should, of course, be noted that, even though inflation might not be halted, a government would still welcome the increase in its loan receipts, perhaps preferring investment to the cessation of inflation.

The position is further complicated by the possibility that the purchases of the new securities may be financed by sales of existing assets as well as by new savings. To the extent that the central bank supports existing securities, the new funds might be illusory. If the credit injected by support should go to private issues, there would be a net inflationary impact. Moreover, apart from direct support operations, there would be a similar impact from any tendency of the clause to bring about a reduction in the real value of cash balances that the public

are willing to hold. However, it is probable that this reduction would be small in any country with a recent history of inflation, for the public would already have reduced their holdings to minimum working balances. On the other hand, any decline in the real value of the currency that the public are willing to hold is of exceptional importance. It is in the issue of currency that the government has its safety valve in an inflation. To cover the same real deficit by an issue of currency would, in future, cause a greater inflation if the real value of the public's holdings of currency should be lowered by the improved alternative store of value.

In addition to the current effect of the issue of government securities with a purchasing power clause, there is the problem of the impact of their financing in later years. If the inflation should continue, there would be increased outlays on debt service, which might accentuate the inflationary pressures at that time. There is some justification for this concern, but it should be made clear that the problem arises solely from unwise government finance. To the extent that the government is enabled through the purchasing power clause to invest and this investment yields a net return greater than the interest charge, there should be no accentuation of inflationary problems. An increase in the debt service in money terms does not indicate a loss to the government, for the return from the government's investment also rises in money terms. The government will find that the taxation base rises *pari passu* with the servicing charge. Of course, the government does forego the gain it would make if investors would accept a money claim that depreciated, but it is precisely because the public will not accept these claims in sufficient quantity that the government turns to the new type of security.

The danger that does arise from the purchasing power clause is that an unwise government, which does not use the funds to expand its real capital, would find itself saddled with a debt service not balanced by a growth in real output. There is a strong danger that eventually such a government would be led to a repudiation of the debt; the purchasing power clause would accentuate this danger, since the government would have greatly reduced power to repudiate the debt implicitly by inflation.[28]

There has been some fear expressed that, by insulating a new group of people from the ravages of inflation, a purchasing power clause in government securities would reduce the political opposition to inflation and thereby tend to perpetuate the evil. This argument does not appear

[28] The power would be reduced but not eliminated because the repayment of a purchasing power bond must be linked to a past price index. Repayment of a debt adjusted in terms of a price index calculated for some earlier date would still permit some reduction in the real value of the settlement.

to be very weighty. Inflation will continue to cause inconveniences to the mass of the people, because of the loss in value of the currency held by them. Workers will still lose owing to the lag in adjustment of wages. The clause would only reduce the depth of discomfort for a group which would still have many inconveniences. Moreover, the use of the clause in the private sector might mean a net gain for the influence of anti-inflationary forces. This group of debtors, normally considered politically powerful relative to creditors, would no longer have an interest in inflation. Without the clause, price stabilization is ruinous for debtors, since they are saddled with interest charges bearable only when prices rise continuously.

It is sometimes felt that the device may speed up inflation by its destruction of the money illusion. Its effect on the holding of money has been discussed above. There is, however, the possibility that it might affect the pricing of services and thereby the speed of a cost inflation. It would seem, for example, that, if the use of the clause in loan contracts should lead to its use in wage contracts, a more rapid rise in wages than would otherwise occur might be induced. However, there seems to be little practical importance in this consideration. In most countries, trade unions are already well prepared to press for the association of claims for higher wages with movements in the cost of living, and in this respect they have little to learn from the use of price indices in loan contracts.

This discussion of the effect of the purchasing power clause on the control of inflation shows that each case has to be studied individually. It seems clear that, with wise management, some contribution could be made. However, the contribution might not be large and it would seem best to regard it, even in favorable circumstances, as supplementary to other measures, particularly budgetary reform, which have to bear the main burden.

Control of deflation

One of Marshall's principal arguments was that widespread use of an index clause would reduce the severity of depressions. The major reason for this belief was that, with widespread use of the clause, the occurrence of unexpected price declines, which would normally occasion the bankruptcy of many debtors, would have a reduced impact and therefore loss of confidence would be avoided. With the lesser impairment of confidence, the volume of investment could thus be maintained more satisfactorily.

Unfortunately, the device would not be able to remove fully the effect of falling prices in increasing the burden of interest charges and capital repayments. Since there is the alternative of holding cash, the

return on securities with a purchasing power clause could never fall below the expected rate of price decline. Because of this limitation, it is likely that the yield on such securities would rise in a depression, and there would not be the stimulus to new investment which Marshall seemed to expect. Moreover, to the extent that it operated, the introduction of the clause in periods of deflation would cause some stimulation of saving and hence some depressive effects on spending. In view of the ready availability of the alternative weapon of deficit spending, it seems difficult to credit the device with a significant contribution in this field.

Practical Disadvantages of the Device

It is clear that the majority of practical financial experts are dubious about advocating any use of a purchasing power clause. It may be argued that much of the opposition arises from innate conservatism. From long experience, banking circles have learned to be skeptical of new devices and believe strongly that any changes should be made slowly and cautiously.[29] By its nature, the use of this clause is likely to be a break with past experience and not a gradual evolution. Although this is a disadvantage, it should not be considered of great importance. With adequate study, it should be possible to judge the proposal on rational grounds without giving undue weight to a fear of unknown factors.

The opposition has, in the past, also been due in part to apprehension about the feasibility of using an index number for measuring changes in obligations.[30] In the days when Jevons and Marshall were advocating the tabular standard, these apprehensions may have been well founded, since it is difficult to provide legal definitions of commodities so that prices can be established exactly. However, with the growth of statistical organizations and statistical measurements, this problem has been solved, for practical purposes, in many countries. Wage contracts have been tied to cost of living indices, and in World War II such arrangements withstood the heavy strain of wartime distortion, which raised very justifiable complaints about the accuracy of the indices.

Still other criticism has originated in too ready an acceptance of the money illusion. It has been suggested that the use of the clause unloads "the whole burden of monetary depreciation on the debtor's shoulders."[31] Of course, it does increase the money payment made by the debtor

[29] Robert Giffen made this point explicitly in his article, "Fancy Monetary Standards," *The Economic Journal* (London), Vol. II (1892), pp. 463–71.
[30] E.g., Walter Bagehot, *op. cit.*
[31] Arthur Nussbaum, *op. cit.*, p. 306.

when there is an inflation, but only to the extent needed to insure that the real burden is constant. Thus the clause actually prevents the burden of the monetary depreciation being borne by the creditor and establishes in its place a balanced position in which neither debtor nor creditor loses.

In no sense, however, do these points of weakness in particular arguments cover the whole basis for practical opposition. There are many sound reasons for believing that the practical problems which would arise are important. These problems all stem from the double standard implied in the proposal—the existence of one form of money, legal tender currency, side by side with another monetary unit, the unit of purchasing power used in loan contracts. This double standard would necessarily create problems of three types: first, the problem of establishing a dividing line beyond which the purchasing power clause cannot be used; second, the problems arising from the pure accounting difficulty of converting purchasing power clauses to money terms, for payments and for balance sheet purposes; third, the problem for banks, and to some extent for other firms, of obtaining a balance of assets and liabilities in this new form to avoid gambling on the future value of money.

The problem of establishing a dividing line may be of little significance if the economy is relatively stable. Technically, the introduction of the clause should not provide very much greater competition with existing money-priced securities than is already provided by equity securities, particularly when account is taken of investment trusts. But in a country where the expectation of inflation is great, there will undoubtedly be a considerable movement toward the new clause. Even in Finland, where prices have in fact been quite stable in recent years, there has been a strong tendency for the use of the clause to spread from one application to another. This spread is to be expected if the advantages are as great as is claimed. However, the spread has to be stopped somewhere. It cannot be permitted to encroach on ordinary currency. If, for example, private banks were permitted to issue banknotes denominated in purchasing power units, there would necessarily be an extremely rapid inflation in nominal money values as the public attempted to reduce their holdings of the official currency. To limit the encroachment, it would presumably be necessary to prohibit demand deposits having this form. Consequently, the banks as a group would probably suffer some loss of funds through the competition of other financial agencies with the power to offer this clause. Equally, life insurance companies might suffer—not because of legal prohibition of the use of a purchasing power clause but simply because, if expressed in terms of purchasing power units, some forms of policy would probably be too cumbersome to use.

The cost and inconvenience of using two units would be noticeable if the clause should become widely used. The inconvenience of calculating the purchasing power equivalent in money of monthly installments on small debts would be great to both the borrower and the lender. Equally, the complication in companies' accounts would be considerable, at least at first. The accounts with purchasing power clauses would either have to be revalued periodically or carried on the books in a unit different from that used for current transactions. These inconveniences, however, do not seem to be sufficient to destroy the general value of the clause. They might be expected to limit its use, some contracts always remaining in money terms.

The problem of balancing assets and liabilities in this form, or at least those subject to the general price movement, would be rather more difficult to meet. Banks clearly must denominate in purchasing power terms roughly equal amounts of loans and deposits. If they do not, a rapid price movement in the wrong direction could destroy their equity. Since a substantial amount of these liabilities would necessarily be in money terms, banks would be forced to make most of their loans in money terms. This would reduce the scope of loan contracts to be made in purchasing power terms and, to some extent, would weaken their value, since the companies receiving part of their capital from money loans might prefer to extend some money loans rather than to extend purchasing power credit to their customers; thus they would keep a balance of assets and liabilities denominated in money. This problem should not be overstressed because it is based on an imbalance which is necessarily, on the average, less than the imbalance at present existing in any normal company; a revaluation of assets in accordance with a general price movement would cause a more significant variation in the real net worth at present than is conceivable if money claims had a purchasing power clause.

The problem of balancing would be aggravated for banks by the marked difference between the liquidity of their assets and the liquidity of their liabilities. If at any time the public suddenly expected significant price increases, there might be a massive movement from money-denominated time deposits to deposits with a purchasing power guarantee. The banks would have to attempt to match this movement in liabilities by a similar adjustment in outstanding loans, but under present banking practices there would be a significant delay before obligations fell due and hence before their terms could be varied. Technically, the banks could safeguard themselves by any of several devices: they could refuse to accept deposits with a purchasing power guarantee on such occasions; they could discourage such deposits by rapid changes in the returns on such accounts relative to others; or they could insert in their loan contracts a conditional clause giving them the right to add

a purchasing power provision. Clearly, any of these solutions would considerably complicate the practical business of banking.

These practical problems, for the most part, merely diminish the advantages to be gained from a purchasing power guarantee, but still leave some positive benefit from its limited use. Apart from limiting the enthusiasm for the clause, they serve to demonstrate the greater long-term gain from a policy of stable prices as opposed to the policy of a stable standard for deferred payments. There can be no question that a single stable standard is preferable when it is obtainable.

In addition, there are innumerable practical problems that may arise because of special circumstances. There are, in particular, political problems in timing which will be dependent on circumstances. The introduction of the clause, not accompanied by other measures, at a time when price increases are growing, might well be taken as meaning that the government had relaxed its efforts to control the problem. In some countries with a previous history of inflation in which somewhat similar clauses were used, the introduction of clauses that are tied to a specified index may, because of the earlier experience, create expectations of further instability.

In some countries there may be a problem of confidence in the index that is used, and doubts about its reliability might hinder sales of government securities that contain an index clause. In some countries there may indeed be no reliable index available; under these circumstances it might prove useful for an international body to advise on the construction of a suitable index. However, even when the index is considered adequate, there necessarily remains some possibility that it will be distorted by price control and subsidy measures concentrated on certain items included in it.

In addition, action might be essential on a number of specific legal problems. The legal enforceability of purchasing power clauses would have to be established beyond question. In several countries, notably Germany and perhaps France, there is evidence that an index clause in private contracts may be unenforceable at present. In many other countries, doubt will remain about the eventual enforceability of such a clause until the government explicitly declares that it will not be abrogated by subsequent legislation.[32] Aside from the doubts about enforceability, certain legal limitations are also often imposed upon securities

[32] The law in many countries is set forth clearly by F. A. Mann in *The Legal Aspect of Money* (London, 2nd ed., 1953), Chap. IV, "Methods of Negativing the Effects of Nominalism," pp. 103–34. The strongest action against such clauses appears to be the decision of the Allied Control Commission in Germany in 1947 which declared all such attempts invalid. In *Revue Economique* (Paris), March 1955, which deals with the experience with index clauses in France, Joseph Hamel expresses somewhat greater doubts about their validity in France than that shown by Mann.

with index clauses. It appears that they cannot be classified as negotiable instruments; and it would seem that such securities would be classified as ineligible under many trustee laws. There is little reason for perpetuating these limitations. However, it would seem somewhat extreme to go as far as one suggestion—namely, to prohibit trustees from investing in fixed money claims on the grounds that historical evidence of inflation indicates that they are the really risky investments![33]

Application to Standardized Examples

The merits and dangers of the use of the purchasing power clause differ widely according to the circumstances of the country. To summarize the arguments, it is therefore useful to present separately the results of the use of the clause under four distinct standardized sets of circumstances.

Example A. Country with chronic inflation, little chance of budgetary reform, negligible public holdings of government debt, and high velocity of circulation of money.

In such a country inflation has to be taken as a datum. The problem is to make it less disruptive. For this purpose, the purchasing power device is well suited if applied to private contracts. It should materially increase voluntary private savings and reduce the waste of savings in the form of foreign currency and inventories and other forms of inefficient direct hedging.

Its application to government securities is rather debatable. The existence of chronic inflation may imply a tendency to overspend, which would prevent the extra savings obtained by the government from reducing the degree of inflation. Furthermore, the weakness of the government may create the hazard that the securities would eventually be repudiated.

A major problem to be watched would be the possibility that the clause might so drastically reduce the willingness of the public to hold money that the economy would be pushed toward hyperinflation.

Example B. Country with inflation but with a new anti-inflation program with reasonable chances of success.

Here, the uncertainty about price movements is very great, and the a priori case for the use of purchasing power guarantees is strong. The political acceptability of anti-inflation programs might be materially

[33] Proposed for the United Kingdom by the author of a series of articles entitled "Agenda for the Age of Inflation," *The Economist* (London), August 25, 1951, pp. 435–37.

increased by prior widespread use of the clause in private contracts, since it would reduce the losses of the debtor class through stabilization.

For government securities, the argument for such clauses is also strong. The government should make good use of the additional loan receipts to assist it over the hump of effective action. Given the success of the program, the government's borrowing would be considerably cheaper than under the alternative monetary form as, in the light of recent experience, the public would attach a high value to the purchasing power clause.

The main problem here seems to be the long-run one of perpetuation of the clause after stabilization. Once used, the arrangements seem likely to persist, and the government might consider it unsatisfactory to have a permanent two-standard monetary system.

Example C. Country with normal stability but with a short-period problem of inflation and with large public holdings of government securities.

In this example the use of the clause in private contracts would prevent the disturbance imposed by unjustified transfers from creditors to debtors and, to a limited extent, might reduce direct hedging. However, as the savings pattern of the country is firmly established, it is unlikely to have been distorted as extremely as when there is chronic inflation. Moreover, direct controls might limit the damage of direct hedging. The economic gains from the use of the device in private contracts might, therefore, be relatively small in comparison with the gains possible in less stable countries.

Issuance of government securities with a purchasing power clause would probably expand substantially the flow of savings to the government, mainly at the expense of private investments, but also from additional savings resulting from the higher rate of return. It could, however, be quite disturbing to the prices of the already existing mass of money-denominated securities. Through attempts to shift from these securities to the new ones with purchasing power guarantees, there would be a considerably increased pressure for higher interest rates. This might be desirable, but most Treasury officials, and probably the majority of economists, would not so regard it. It might be possible to minimize this disturbance by restrictive arrangements making the issue open only to small savers, to provide only limited transferability, and to impose penalties for redemption before a relatively late maturity. It should also be remembered that any attempt to obtain for the government the same amount by raising the rate of interest on conventional securities would be equally disturbing to the market.

Example D. A country with normal stability and an advanced economy.

As a permanent arrangement, there is an advantage—argued by Keynes—for the Treasury in adapting itself to the market. Theoretically,

it could gain by issuing securities with a purchasing power clause at a very low rate of interest—the rate being set low enough to attract only a small group of investors. However, it would be implausible to expect a significant gain in any practical case, for in the past 20 years every country has shown some tendency toward price inflation. Also, it is probable that even a small marketable issue might prove disturbing to the money illusion, and hence to the bond market in times of limited inflation. Again, some competent economists might regard the effect on the bond market (it would push rates up when price increases occur) as desirable, but the weight of opinion would regard this as a significant disadvantage.

APPENDICES

I. Details of Some Recent Applications

Savings accounts in Finland

Most Finnish credit institutions, although not the largest savings bank, introduced on May 2, 1955 deposit facilities with a purchasing power guarantee. The deposits had to be made for a fixed term of one year, and the minimum deposit permitted was 30,000 markkas (US$130). The interest return was 4¾ per cent, in comparison with 6¼ per cent on six-month time deposits without the guarantee. The return was not exempt from state taxes as was the return on other time deposits.

The guarantee provided that, if the cost of living should rise by 2 per cent or more over the October 1954 level, the value of the deposit in money terms would be increased proportionately. There was no provision for a reduction of the deposit if the cost of living index should fall. The April 1955 cost of living index was in fact 5 per cent below the October 1954 level; there was therefore no protection against a 5 per cent price rise.

Apparently, the Finnish banks had found that instead of holding deposits many of their customers preferred to invest in the government securities with a purchasing power clause, which have been issued in Finland for several years. However, depositors made very little use of the new deposit facilities during the first months after their introduction, according to some reports, because of the adoption of the October 1954 price index as the standard. The banks, moreover, have so far not made arrangements to include a purchasing power clause in their loan contracts. Apparently the contingent liability is covered by holding government securities with a purchasing power clause.

Public utility bonds in France

Electricité de France, a government corporation, was the first to issue in France securities containing a purchasing power guarantee in terms of the product made and sold by the issuing authority. In October 1952 it issued bonds at 16,000 francs, with annual interest equal to the average selling price of 100 kilowatt hours in the preceding year or 720 francs, whichever was the greater. They were to be redeemed between 1958 and 1968 at the average price of 2,000 kilowatt hours at the date of repurchase or 16,000 francs, whichever might be the greater. The selling price was to be calculated by dividing the total revenue of the company from sales of electricity by the number of kilowatt hours sold.

At the time of issue, the selling price of electricity was under 8 francs but over 7.2 francs per kilowatt hour. Consequently, the interest payments had full guarantee for upward price changes and a limited possibility for decline. The principal, on the other hand, had no possibility of being reduced, and a full guarantee only when prices had risen by more than 2 or 3 per cent. The method prescribed for calculating the selling price of electricity was such that some decline in the average price was to be expected even if all specific rates were left unchanged, since the use of industrial power, the charge for which was lower than the average, was likely to expand more rapidly than the use of electricity in general.

The issue was very successful and was followed by similar ones for coal, railways, and gas, as well as other electricity issues. The public preference for these securities over securities without a purchasing power provision was shown by a substantial difference in yield. In April 1955, the difference reached a peak when the yield on securities of public industrial enterprises with a purchasing power clause was 3.72 per cent, while the yield on securities of the same enterprises without such a clause was 5.95 per cent.

Savings deposits in Mainland China

During a rapid inflation in 1949, the Peoples Bank in Mainland China introduced the Parity Deposit System, under which time deposits were calculated in terms of commodity units. In Shanghai each commodity unit consisted of a fixed quantity of medium-grade rice, cotton fabric, peanut oil, and coal briquettes. It appears that, at this stage, the system had a full index clause allowing variations up and down. In May 1950, when there was more hope of price stability, the system provided that the principal and interest could be withdrawn either in terms of currency or of commodity units. Bank loans are also reported to have been converted to a purchasing power basis when the Parity Deposit System was introduced, thereby providing the bank with the necessary hedge.

II. Selection of the Price Index

If commodity price movements were uniform, there would be no problem in the selection of an appropriate price index to be used as a basis for a purchasing power guarantee, for all indices would give the same result. But, of course, price movements are far from uniform, and there is a bewildering array of possible prices and price indices that could be used and would give varying results. In selecting from these possibilities, many considerations should be borne in mind. Although some of these considerations will be particular to the case in question, many of the more important factors can be analyzed in advance.

Especially for countries where inflation has already been severe, and which are therefore the most likely to introduce a purchasing power guarantee, there is, however, one point of primary importance. In such countries the use of any price index would create an obligation that was more stable in real terms than obligations denominated in terms of money. Any differences between the various measures of price movements will therefore be much less significant than the difference between any one of them and a money standard to which no purchasing power guarantee has been attached.

The simplest device that has been suggested consists of denominating the loan in terms of the selling price of the borrower. This is the procedure followed by the French public utilities. The advantage of this price is, of course, a reduction of the risk for the borrower that his debts will grow in money terms without a commensurate increase in his ability to service them. On the other hand, there is the disadvantage to the lender of a variable purchasing power of the loan in terms of his expenditures. If the borrower's selling price rises less than the general price level, the lender bears the loss. Abstractly, it would seem that the risk involved in sectional price movements might be more properly borne by the borrower

simply because he should be more expert in determining the future comparative prosperity of his industry. Moreover, some of the sectional price movements will be related to differential rates of technological advance, in which case price declines may indicate improved, rather than lessened, ability to service the debt. The significance of these arguments would seem to be sharply reduced if the sector price were defined on a broad basis; for example, a sector as wide as agriculture.

In the particular case of public utilities, there are further considerations. The movements of public utility charges are notoriously a poor indicator of the degree of inflation. In almost every country they move much less and much more slowly than the general price level. Consequently, a purchasing power clause expressed in terms of public utility charges would still leave the lender with a reduced real return in the event of inflation. Moreover, when the utility's debts are tied to its own selling price, it seems probable that there would be an even greater reluctance to vary the selling price. This would not only reduce the inflation hedge to the lender; it would also have the unfortunate effect of underpricing the utility, with the consequent problems of perpetual overdemand or overinvestment supported by subsidies.

The use of individual selling prices introduces into the bond market a bewildering array of standards. Instead of the relatively simple double standard—money for current payments and an index for deferred payments—there is a multiple standard with increasing complexity for the investor and one that would probably inhibit attempts to obtain more liberal standards for trustee investments. If there is an intention to encourage the widespread use of a purchasing power clause, it would seem desirable to standardize its form as much as possible.

Another single price that has been widely used is that of gold or of foreign exchange. Gold (or dollars) has the advantage of being precisely defined and a sensitive index of inflation. Furthermore, the historical use of gold in payments has made its use for deferred payments more easily comprehended than the use of abstract indices. On the other hand, this history has made both courts and governments sensitive to the implicit challenge to the sovereign right of a country to determine the legal tender. Consequently, such clauses are illegal in many countries, and it has proved easy to pass retroactive legislation making any present legality of doubtful permanence.[34] Also, the precision of the price of gold has suffered in recent years. Governments have so many regulations affecting the prices—both official and free—of gold and foreign exchange that any price chosen for a purchasing power clause is subject to the danger of arbitrary variation, arbitrary exclusion from variation, or even disappearance.

Moreover, the use of gold or foreign exchange as a standard of reference has further disadvantages. Whereas the selling price of public utilities is likely to underestimate the degree of price inflation, the price of gold or foreign exchange is likely to overestimate it. Through speculation, the depreciation of the local currency in terms of gold is likely to be much more rapid than in terms of local goods. Although this unrepresentativeness might be somewhat reduced if most deferred payments were on a purchasing power basis, thereby eliminating some of the desire to speculate, it is certain in any significant inflation to cause borrowers to lose unduly as they overcompensate lenders. It therefore partly fails in its purpose to remove risk in loan contracts.[35]

For government borrowing, the use of a gold clause in favorable circumstances is rather advantageous. In particular, if the government is attempting to raise a loan in a stabilization program after a period of inflation, the free gold price is

[34] Arthur Nussbaum, *op. cit.*, p. 280, lists over 30 countries in which legislation affecting the validity of gold clauses has been passed.

[35] In some circumstances it fails completely. For example, in the United States the devaluation of 1933–34 caused a 70 per cent rise in the price of gold while other prices were approximately stable. This caused the burden of loans with a gold clause to increase sharply—extremely sharply when account is taken of the fall in commodity prices after many of them were contracted. Consequently, there was strong agitation by debtors against the enforcement of the gold clause, which led to the passing of abrogatory legislation.

likely to be particularly favorable to it. The gold price will have overstressed the inflation and is likely to fall significantly if the stabilization is successful. In such circumstances, the government has much to gain and little to lose from a gold clause.

Particular prices—whether of gold or of the goods sold by the borrower—are necessarily inferior for the basic purpose of a purchasing power clause. The arguments for the clause are based directly on the need to avoid the distortion arising from movements of the general price level. This purpose can be achieved only if a direct attempt is made to obtain a representative price index in which the special factors affecting individual prices are submerged in an average that measures only the general pervading influence of inflation or deflation.

But, although the object is to measure general prices, there is one basic question on which a decision is required. Which is more appropriate, the measurement of prices paid to producers of goods and services or the measurement of prices paid by consumers? If, as is ideally desirable, the measurements covered *all* producers' prices and *all* consumers' prices, the two would be identical in a closed economy. But, in an open economy, the two may differ significantly, for producers' prices include the prices of exports, while consumers' prices exclude the prices of exports but include the prices of imports.

The two price indices differ only when the terms of trade vary. If there is an adverse movement in the terms of trade, the use of a producers' price index will cause the lender to lose in terms of consumers' prices while the use of consumers' prices would cause a loss for the producers. The choice between them thus becomes a question of which side should bear the uncertainty of loss (or of gain if the terms of trade improve). Since it seems that the uncertainty would weigh more heavily with the borrower, his debt payments being more significant to his net income than the interest receipts would be to most lenders, the decision would seem to be in favor of using producers' prices. This, of course, is not directly relevant when the government is borrowing, insofar as the intention is to maximize the savings offered to it. However, even a government may wish to provide for a lightening of the real burden of its debt when there is a severe loss in terms of trade.

Theoretically, it would seem that the index used should be as inclusive as possible, covering as many prices as is feasible. In practice, of course, the index will have to be compiled from a limited sample of data, weighted to represent classes of goods. The extent of the coverage might depend primarily on the number of items for which standardized prices are available and the size of the statistical staff available to compile the index. There is, however, a possibility that in some countries the sample might be deliberately kept small to increase the likelihood that people would understand it. An index based on prices of five or ten major commodities might be sufficiently simple to be understood widely, and at the same time accuracy of measurement would not be sacrificed.

Government Capital Budgets

Richard Goode and Eugene A. Birnbaum*

THE FORM in which a government's budget is presented reflects to some extent official attitudes toward the various components of receipts and expenditures, and it also influences popular interpretations of the government's program. In this respect the treatment of capital receipts and expenditures is especially important. A number of countries maintain separate capital and current budgets, and other countries accord special treatment by other means to at least a part of capital items. The advisability of introducing a capital budget has recently been under public discussion in several countries that have not used the device. At the same time, there have been indications that in some countries with established capital budgets the financial implications of the system are being reconsidered.

This paper explores the economic implications of a dual government budget system involving separate capital and current budgets. It reviews the purposes that such systems appear to be intended to serve and criteria for distinguishing between capital and current items. The influence of a dual budget system on the amount and composition of government expenditures and means of financing is examined. Attention is also given to the problem of measuring government expenditures, receipts, and surplus or deficit when a separate capital budget is employed.[1]

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[1] In its original form this paper included a series of notes describing the budget and accounting systems of Sweden, the Netherlands, Ecuador, the Union of South Africa, India, the United Kingdom, Canada, and the United States. The notes also contain some discussion of the significance that appears to be attached in official policy statements to the form of the budget. Mimeographed copies of the notes may be obtained from the Secretary, International Monetary Fund, Washington 25, D.C.

General Nature of Capital Budgets

The scope of government capital budgets in different countries and the financial practices associated with them vary widely. The one essential characteristic is that some or all of the general government's expenditures for "capital" items are segregated and presented in a special budget separate from the budget covering operating expenditures.[2] Capital items for this purpose should be understood broadly to cover both physical and financial assets which are expected to yield a return in future years. This return may be in the form of services, as from public buildings, or of receipts from sales, interest, dividends, etc. Few if any governments attempt to include all transactions in capital assets, in this broad sense, in the capital budget, but some items of each type are often included. Moreover, a few governments include in the capital budget items that would not ordinarily be regarded as assets.

The establishment of a separate capital budget carries a strong presumption that the method of financing the expenditures included in it will normally differ from that used for other government expenditures. Usually, borrowing is considered more appropriate for capital expenditures than for current expenditures; in the Union of South Africa, for example, the capital budget is called the "loan account." In inflationary periods, however, some countries, including South Africa, make a special effort to cover a part of capital outlays by a current account surplus. In some capital budgets, the principal item on the receipts side is proceeds of borrowing; in other systems, borrowing is not listed as a capital budget receipt but is considered an appropriate means of covering any excess of capital outlays over capital receipts. Other common items of capital receipts include transfers from the operating budget, proceeds of sales of state property, and recoveries of loans. It is sometimes suggested that revenues from death duties, capital levies, and other taxes that are presumed to be paid from private capital be assigned to the capital budget. Certain user taxes, such as those on motor fuels, are occasionally allocated to the capital budget.

Governments that use capital budgets often provide for depreciation or amortization allowances against certain assets. These allowances are usually recorded as receipts in the capital budget and as expenditures in the operations budget[3] or the enterprise budgets. In Sweden and Ecuador initial write-offs of the nonremunerative part of capital expenditures are included in current expenditures when the outlays

[2] State trading or industrial enterprises usually employ commercial accounting methods, involving capital accounts, regardless of whether a separate capital budget is maintained by the administrative departments of the general government.

[3] The terms "operations budget," "current budget," and "revenue budget" are often used interchangeably, and this practice is followed in the present paper.

are made. In some countries—for example, Sweden—provision is made for rental charges for occupancy of public buildings, which are recorded as expenditures in the current budget and as current receipts in the enterprise budgets.

Governments that do not employ formal capital budgets may approximate some of the results of capital budgeting by the establishment of autonomous government entities which carry out public investment and whose activities are in the main outside the general budget. In Mexico, for example, a sizable fraction of government investment has been financed through a national finance corporation and the government banks. Lease-purchase arrangements for public buildings and other facilities also resemble capital budgeting in the sense that the government's operations budget reflects the annual cost of the facilities (consisting mainly of operating costs, interest, and depreciation) over a period of years rather than the construction cost at the time when the facilities are built. In the United States, where these arrangements have recently been adopted for government office buildings and post offices, the original construction cost is financed by private investors, and the government leases the building, receiving title after an agreed number of years.[4]

Purposes of Capital Budgets

Inasmuch as there are usually no detailed official statements of the purposes that are expected to be served by the establishment of a capital budget, the discussion of these purposes must be conjectural, to some extent.

Reflection of government's assets

An advantage that is often claimed for a separate capital budget is that the distinction between expenditures which do and expenditures which do not result in the acquisition of an asset aids in the interpretation of figures on government finance. This approach commends itself to many persons as an application of private accounting principles. In private accounting, outlays for assets that are expected to yield a return over a period of years are ordinarily "capitalized" (i.e., charged or debited to asset accounts). Capitalized outlays, in contrast to current expenses, are not immediately deducted from receipts in computing annual profits of a private firm. (If the asset is depreciable, its cost

[4] An analogous procedure has been followed for power-generating facilities. The full construction costs of many projects, however, are still included in the budget when incurred.

is deducted in installments over a period of years which in principle coincides with the expected useful life of the asset.)

By analogy, it may be argued that there is a notable difference between government expenditures for assets and for current operations. In the government as well as in the private sphere, expenditures for assets give rise to the expectation of a future return. They represent collective investment, whereas operating expenditures represent collective consumption. The analogy with private accounting suggests that the inclusion of investment outlays in government expenditures, without recording the matching asset, will give a misleading impression of the state of government finances.

From the analogy with private accounting, it is an easy step to conclude that an excess of government expenditures over revenue receipts when incurred in order to acquire capital assets should not be regarded in the same light as when it is attributable to current operations. If the excess expenditures are covered by borrowing, there is no change in the government's net asset position (net worth) when the expenditures are for capital assets, the increase in indebtedness being matched by an increase in assets. When current expenditures are met by borrowing, however, the government's net assets or net worth (assets minus liabilities) decline. Similarly, financing capital expenditures by the use of government cash resources or the sale of property does not change net assets, but financing current expenditures in this way reduces net assets.

The extent to which private accounting principles are properly applicable to government is questionable, however. The primary objective of private business is to increase net worth and distributable profits. Both current expenses and capital outlays are merely a means to that end and should be held to the lowest level that is consistent with maximizing profits (and net worth). The objectives of government are more complex, and the extent to which they are achieved cannot be measured simply by reference to a balance sheet.[5] In this respect, government operations are more closely analogous to those of a household than to those of a business firm. Expenditures by government to provide current services for the community resemble a family's consumption expenditures in that both types of expenditure represent a proximate end rather than a means. Acquisition of assets which will increase future capacity to consume does not necessarily have a rational claim to priority over current consumption in the plans of a government or a household.[6]

[5] For a discussion arguing that commercial accounting principles have only a limited relevance to government accounting, see Committee on the Form of Government Accounts, *Final Report* (London, Cmd. 7969, June 1950), pp. 74–76.

[6] The analogy between a government and a household, of course, should not be pressed too far. Decisions concerning the amount of economic resources over

There are important practical difficulties in valuing many government assets because they serve purposes which are not market-oriented or profit-seeking. In addition to the conundrums presented by attempts to value such items as art museums, roads, and battleships, elements of complexity and uncertainty would be involved in any effort to report tax revenues on an accrual basis. In some cases, final accounting of government transactions has been greatly delayed, and figures have been frequently revised in an effort to assign receipts and expenditures to the year in which they accrued rather than to the year in which the cash receipts or payments occurred.

A possible disadvantage of government capital budgeting is that the analogy with private accounting may be interpreted as suggesting that acquisition of assets is generally preferable to expenditures for current operations. Such a preference may be strengthened if the financing of capital outlays is politically easier than the financing of current expenditures, as may well be the case when capital items are covered by borrowing.

Allocation of costs over time

In government accounting as well as in private accounting, the practice of capitalizing certain outlays may serve as the basis for a convenient method of allocating costs over time.[7] The most familiar example is provided by durable plant and equipment. In private accounting, outlays for these items are capitalized in the year in which they occur and are written off in the form of depreciation or amortization allowances over the period of years during which the plant and equipment are expected to contribute to income. This procedure reduces irregularities in the reported costs and net income, and is universally considered to result in a more accurate statement of business costs and profits in each time period.

The same reasoning may be applied to government costs. If, for example, the government spends 1,000 to construct an office building that is expected to last 50 years, a more useful statement of the cost of office space may be obtained if this is reported as, say, a series of items of 20 a year for 50 years than if it is recorded as 1,000 in the first year. Under the accrual method, it is easier to compare the cost of erecting a government building with the cost of renting a privately owned building and also to appraise the cost of additional office space in the light of expected gains in convenience and efficiency.

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which the government will attempt to gain command in any period are based on considerations and opportunities fundamentally different from those presented to a household.

[7] This procedure involves asset accounting, but it carries no necessary implication that the capitalized cost exactly represents the "value" of the item or the future benefits from it.

The procedure, it should be noted, requires both the segregation of capital outlays when made and their distribution over the estimated service life of the assets by means of depreciation or amortization allowances. A budget system, such as is in effect in several countries, which provides for segregation of capital outlays but not for depreciation or amortization allowances, will not achieve any significant improvement in cost allocation over time.[8]

To be sure, the method of accounting does not alter the fact that the original construction imposes a draft on economic resources and thus represents a real cost to the community, in terms of foregone opportunities, when the work is carried out. It is now generally recognized that this real cost cannot be passed on to future generations. The original outlay also presents the government with a financing problem at that time. These considerations are two of the principal reasons for obtaining accurate figures on total government costs; both suggest the reporting of capital as well as current expenditures in the period when incurred.

On the other hand, an analysis of the costs of particular government programs or services may be facilitated by capital accounting and the spreading of depreciation allowances. When the timing of capital outlays is irregular, the inclusion of both capital and current outlays when they are originally made will result in wide fluctuations in reported annual costs of the program and will complicate the already difficult process of comparing annual costs and benefits. Under a capital budget system providing accrual accounting, annual program costs as reported in the operations budget would include depreciation or amortization (and possibly interest) on capital equipment.

This phase of program costing stems entirely from the irregularity of capital outlays. In a perfectly stable program involving a great number of comparatively small capital outlays, these outlays would equal normal depreciation allowances each year.[9] It would therefore be a matter of indifference whether capital costs were reported on the basis of cash outlays or of accrued depreciation. When, however, comparatively large and infrequent capital outlays are required, the two methods of costing would yield rather different year-by-year figures. Since irregularity of capital outlays is likely to be more characteristic of small programs and small governmental units than of large programs and units, capital budgeting and accrual accounting may be especially revealing for the former. Furthermore, the two methods of accounting may yield sharply different cost figures for rapidly expanding or con-

[8] Strictly speaking, interest costs on invested capital or a time discount for future benefits should also be imputed, but this refinement has usually been neglected.

[9] Provided annual outlays for new capital had been constant for a period of years equal to the average depreciable life of the assets.

tracting programs and in the years immediately after a new capital budget is adopted.

Another aspect of the measurement of program costs relates to the degree to which capital equipment is specialized rather than to the regularity with which it is acquired. When capital equipment is to some degree nonspecialized and hence capable of being diverted from one governmental use to another or of being sold to private investors, it may be difficult to allocate capital costs among various programs at the time when the equipment is acquired. For example, the government may buy earthmoving equipment, employ it initially for road building, and later use it to construct irrigation canals. In this case, an accurate allocation of the cost of the equipment between road construction and irrigation works may not be feasible when the machinery is purchased. The cost of fully specialized equipment, on the other hand, can be definitely assigned to a program at the outset.

Despite the theoretical advantages of capital budgeting in measuring annual program costs and in allocating resources among competing uses, there is little evidence that these potentialities have so far received much attention or application. In most countries, more emphasis has been given to broad aggregates, which are more difficult to interpret and to use as policy guides.

Administrative Management and Control

Inasmuch as accurate statements of program costs are indispensable to efficient management and control at the program level, the possible advantages of capital budgeting and accrual accounting for these purposes, given certain conditions, are evident. The degree of specialization of the capital assets is again a highly relevant question. Administrative management and control are much more likely to be facilitated by including depreciation accruals in program costs when the capital items are unspecialized than when they represent resources already irrevocably committed to a particular program. In the former case, the fiscal authorities have to consider periodically whether the services of the nonspecialized capital equipment should continue to be devoted to the existing use or should be made available to another program which is judged to have a stronger claim. This decision is parallel to that with respect to, say, the employment of personnel and can be most effectively made by reference to annual costs, represented by depreciation accruals. With respect to specialized equipment, on the other hand, past capital outlays need be taken into account only to the extent that they influence the service yield of current expenditures for labor and materials.

In the general government sector, capital budget techniques have

not yet been widely applied for management and control purposes at the program level. In the public enterprise sector, the merits of accrual accounting for capital outlays have achieved more general recognition. State enterprises customarily employ commercial accounting which does involve accrual of capital costs. Application of this procedure to enterprises does not require a capital budget for the government proper.

Information on capital formation

A capital budget may serve the purpose of providing information on capital formation in the public sector. Although it is undeniably true that many so-called current expenditures of government—as well as some current expenses of business firms and part of private consumption—yield a significant future return, special interest attaches to outlays for tangible items of a durable nature which have this characteristic to a peculiar degree. These last items are included in estimates of capital formation in the private sector, and many systems of social accounts call for information on these items in the government sector as well, to arrive at comprehensive estimates of national capital formation.

In order to provide information on *gross* capital formation in the government sector, a separate capital budget is not essential. All that is required is to make a distinction between capital and current expenditures, which may be supplied by classification within a unified budget or by an informational table. (An informational table is appended to the budget of the United States, for example; and in Canada a list of physical assets valued at original cost is presented.) This is not enough, however, to provide information on *net* capital formation. For this purpose, it is necessary to present figures on depreciation, either as part of a formal capital budget system or by ad hoc estimates.[10]

For social accounting purposes, it is also necessary to distinguish between transactions in government assets which represent a real accretion to the community's wealth and those which do not. The former consist of acquisitions of newly produced durable physical assets, such as machinery and buildings; they are a component of national capital formation. The latter consist of existing physical assets acquired by purchase, such as land and secondhand machinery and buildings, and financial assets, such as loans and securities. Government capital budgets, being designed on the same lines as private accounting

[10] For preparation of a comprehensive estimate of net capital formation in the government sector, it would be necessary to take a complete inventory of state property at the time when a capital budget was adopted, and to make estimates of annual depreciation of the old items as well as to recognize the depreciation allowances set up for new assets.

systems, ordinarily do not show this distinction and hence are not readily adaptable for social accounting purposes.

It may be concluded that a properly oriented capital budget system can make a helpful contribution to the provision of social accounting data on capital formation in the public sector. A formal capital budget, however, is not indispensable to the preparation of complete social accounts. Estimates of government capital formation can often be made on the basis of collateral data. The budget and public accounts, moreover, are drawn up primarily to facilitate government management and policy making. Considerations of statistical convenience are secondary in importance.

Political acceptability

Capital budgeting may have the effect of increasing the political acceptability of government capital expenditures and of government borrowing. Opposition to tax increases and to budget deficits may pose a limitation to government expenditures in most democratic countries. When a dual budget system exists, taxation requirements are likely to be decided mainly by reference to the operations budget. Expenditures in the capital budget may be covered to a large extent by borrowing; but, since assets are being acquired, this borrowing may not be considered a form of "deficit" finance. Expenditures assigned to the capital budget may therefore escape partly or entirely the usual political checks.

As already explained, however, a full-fledged capital budget involves not merely the removal of capital outlays from the operations budget but the addition of estimated depreciation or amortization requirements to the expenditure side of the operations budget. If the rate of capital outlays were constant, these allowances would, after a time, equal new outlays for depreciable assets, and the size of the operations budget would be completely unaffected by the segregation of outlays for such assets in a separate capital budget.[11] The amount of expenditures most directly subject to the normal political checks—i.e., expenditures in the operations budget—will be smaller under a divided budget system than total expenditures under a unified budget to the extent that outlays for depreciable assets exceed annual depreciation allowances, owing to an irregular or cyclical fluctuation or to secular growth. Exclusion of outlays for nondepreciable assets, such as land and certain financial assets, will tend to hold down the size of the operations budget in all years unless the purchase of nondepreciable assets is charged in some

[11] This point has been stressed by James A. Maxwell in "The Capital Budget," *The Quarterly Journal of Economics* (Cambridge, Mass.), Vol. 57 (1942–43), pp. 450–65.

other way to the current budget. One way of doing this would be to include in current expenditure the subsequent debt interest and amortization charges relating to land purchases financed by borrowing.

Capital budgets have been favored by those who believe that when a unified budget is employed government expenditures tend to remain below the optimum level. During the 1930's some advocates of the capital budget in the United States believed that its introduction was desirable to bring about a relaxation of traditional checks on government expenditures, which they felt were interfering with compensatory fiscal action. Although the problem of capital consumption allowances was often neglected in these discussions, advocates of the capital budget might have argued that, since in a period of depression government capital outlays should expand more rapidly than depreciation accruals, the inclusion of depreciation allowances would not pose a serious obstacle to the political acceptability of the policy that they wished to pursue. Other advocates of the capital budget have held that in rich countries there is a chronic tendency for government expenditures to fall below the optimum level, and that introduction of the capital budget would make it easier to overcome this tendency.

Many critics of the capital budget regard the political arguments in its favor as evidence of a cynical lack of confidence in public understanding of economic affairs. They argue that any appropriate countercyclical adjustment of government expenditures and means of finance can be made within the framework of a unified budget, and they favor reliance on education to break down traditional opposition to such a policy. In regard to the secular problem, some of the critics deny the need for a relaxation of the balanced budget norm and rely on monetization of public or private debt to provide any required growth of liquidity.

Workable rule for government borrowing

A somewhat more sophisticated version of the political arguments in favor of the capital budget is the contention that capital budgeting offers a workable rule for regulating the amount of government borrowing. According to this line of reasoning, government borrowing has positive advantages, provided it can be kept within reasonable limits. These limits, it is said, can be enforced by adopting a divided budget and two rules for financing. The first of these rules is that current expenditures should normally be covered by current revenues. This norm of balancing the operations budget is intended to provide a desirable element of discipline and to help prevent extravagance. The second rule is that capital outlays will normally be financed by long-term bor-

rowing[12] and that proper depreciation allowances on capital assets will be entered as expenditures in the operations budget. This rule is intended to prevent an excessive increase in government debt and service charges.

The first advantage claimed for the plan of borrowing to finance capital outlays is that it avoids the frequent tax revisions which would have to be made if a fluctuating volume of capital outlays were to be covered out of current revenue. Although fluctuations in capital outlays are likely to be greater for a small unit than for a national government, capital outlays are probably more irregular than operating expenditures for virtually all governmental units.

A second argument in favor of borrowing to finance capital outlays is that it allows a better distribution of the cost of government services among beneficiaries and taxpayers. By adopting loan finance, the government can defer final allocation of capital costs within the community and can levy charges or taxes designed to recover capital costs from users of the services. Tax financing, on the other hand, brings about a final allocation of costs at the outset. This consideration should be sharply distinguished from the fallacious notion that the total social cost of government expenditures can be passed on to future generations by means of borrowing. The real costs of capital outlays, as measured by foregone opportunities, are necessarily incurred at the moment when the facilities are produced.[13] Under a program of loan finance, however, these costs are voluntarily assumed at that time by creditors of the government. They are finally allocated when the creditors are repaid out of the proceeds of taxes or charges collected from other members of the community.

A third argument in favor of loan financing for capital outlays is that it results in a better division of the national product between consumption and investment. To the extent that taxes are raised out of income that would otherwise be used for private consumption, tax financing of current expenditures of government will bring about a substitution of public consumption for private consumption. On the other hand, long-term government borrowing from the public tends to reduce private investment by restricting the availability of funds and raising interest rates. Hence, the financing of government net capital formation by borrowing will tend to reflect a substitution of public investment for private investment. It can be argued that this is a reason-

[12] As often stated, the rule holds that the maturity of the debt should ordinarily be approximately equal to the expected life of the assets. For many capital investments, this implies long-term borrowing.

[13] The method of financing, of course, may have some future effects on capital supply and productivity.

able substitution and that loan financing involves a minimum of interference with the freely exercised choice of the public regarding the division of national production between total consumption and investment.[14] At the same time, in a growing economy the secular increase in government capital outlays will provide for an expansion of government debt to satisfy the public's demand for such assets.

Most proponents of the divided budget and the financial rules mentioned above would concede that, under conditions of incipient or actual unemployment and deflation, it is not advisable to attempt to finance government net investment in a way that will displace private investment. Under these conditions, the real (opportunity) cost of government investment and also of current services is reduced and may become virtually zero or possibly negative. Hence it may be desirable to finance government capital outlays, and perhaps even a part of current operating expenditures, by short-term borrowing[15] or by an expansion of central bank credit.

In opposition to the claim that the divided budget system provides a workable rule for government borrowing, it may be contended that loan financing of capital outlays introduces an inflationary bias at all times. The curtailment of private expenditures that is caused by even long-term borrowing is ordinarily less than that brought about by taxation; and this tends to be more true if the government maintains easy credit conditions in an attempt to hold down interest costs on the public debt. An underdeveloped country, in particular, may have few opportunities for borrowing from genuine savings of the public, and loan financing of capital outlays may involve recourse to the commercial banks and the central bank, leading to an excessive expansion of credit and to chronic inflationary pressure. Furthermore, an underdeveloped country may be interested more in increasing total capital formation than in respecting the wishes of the public regarding the division of the national product between saving and consumption, and therefore may not hesitate to finance government investment by means of taxation.

Distinction Between Capital and Current Items

In practice, the criteria employed for allocating items between the capital and the current budget are often not carefully stated and, to a

[14] To be sure, the policy involves proportionately large changes in private investment, but the division of national product between total consumption and total investment (including private and government items in both magnitudes) may be regarded as more fundamental.

[15] Short-term securities are more liquid than long-term securities; hence their sale to the public and the banks is likely to bring about a smaller contraction of private expenditures.

considerable extent, they appear to be arbitrary. This section discusses some of the criteria that have been used or suggested.

Asset criterion

The fact that capital expenditures change the form but not the net total of government assets, while current expenditures reduce the net assets of the government,[16] provides one general criterion. A capital expenditure for the acquisition of physical or financial assets involves the exchange of cash (or an increase in liabilities) for these assets. Similarly, many capital receipts reflect merely a change in the form of government assets and liabilities. For example, receipts from the sale of physical or financial assets initially involve an increase in cash and an equal decrease in other assets; and net borrowing increases assets (cash) and liabilities (public debt) by equal amounts. However, receipts from capital taxes, which are sometimes included in the capital budget, reflect a net increase in government assets. Current expenditures involve a decrease in government assets and current receipts involve an increase.

This approach parallels private accounting usage, but it merely throws the question back to the definition of "assets." Although a fairly explicit set of conventions exists in private accounting for identifying assets and distinguishing between capital outlays and current expenses, some difficult questions arise in this connection. In government accounting, conventional rules for allocation are less well settled and more problems are involved.

In both private and government accounting, the time factor is the primary basis for identifying assets. An asset represents basically a claim for or an expectation of future income or services. Usually the claim or expectation is associated with a physical good, such as a building or piece of machinery, or with a security, such as a bond or share, and these items are customarily referred to as "assets." To some extent, however, private accounting principles recognize the existence of assets which represent merely accounting entries indicating the expectation of future income. An example is the capitalization of research expenditures. Goodwill of a business may also appear as an asset on the firm's books even though, unlike most other assets, it may not be specifically associated with identifiable past expenditures. It can be confidently asserted, however, that no widely used accounting system provides for the capitalization of *all* expenditures that can reasonably be expected to add to the entity's future income. Thus disbursements that are classified as ordinary operating expenses contribute indirectly to the

[16] United Nations, Department of Economic Affairs, *Manual for the Classification of Government Accounts* (New York, preliminary, July 1954), p. 127.

earning of future as well as of current income, if only through the preservation of the firm as a going concern or the continuity of the unit.

In the more inclusive government capital budgets, expenditures for durable goods and for the acquisition of financial claims on other sectors (which include securities and loans) are classified as capital outlays. Expenditures for the acquisition of goods under a stockpiling program are also sometimes considered capital investments,[17] but inventories of office supplies and other materials are seldom treated as capital assets except in government enterprises which employ commercial accounting systems. As a matter of convenience, comparatively minor items, such as office furniture and equipment, are often omitted from government capital accounts.

Outlays for military equipment are also commonly omitted from capital accounts. This omission may reflect in part the belief that military items have a high rate of obsolescence and an uncertain life. It may also be associated with the attitude that these items are not "productive" in the same sense as civilian capital goods. The specialized nature of much military equipment means that, for reasons stated above, expenditures on this account can be unequivocally assigned to the defense program.

The absence of a clear-cut profit standard may help to explain the fact that governments seldom classify as capital items expenditures for certain services that may reasonably be expected to yield a return to the community in the future as well as the present. Examples of this type of item are expenditures for education, public health, and research. The special tabulation of investment expenditures of the U.S. Government, however, includes outlays for research, education, and health (and also on military equipment).

"Productivity" criterion

"Productivity" is sometimes suggested as the basis for identifying capital assets, but on examination this proves to be a slippery concept. In the broad sense, all government expenditures that satisfy wants of the community must be regarded as productive. The underlying idea seems to be to distinguish between items which are instrumental in the sense that they contribute to the provision of other goods and services —either in the government or the private sector—and items which represent final goods and services. The instrumental goods and services contribute to the production of national income as ordinarily measured; the final goods cannot be associated with the production of any par-

[17] When stocks are acquired in connection with a government price-support program, their value may be somewhat problematical.

ticular part of future national income. Some items can be classified fairly easily on this basis, but many government expenditures cannot be so classified.

Self-liquidating feature as a criterion

A somewhat related but less ambiguous basis of classification is to assign only self-liquidating items to the capital budget. The clearest case of a self-liquidating project is one for which sales of services to the private sector are expected to return initial and operating costs over a period of years. Examples are toll roads, irrigation projects, rental housing, and the like. On the financial side, a loan is an example.

A self-liquidating program may be financed by earmarked user taxes. Taxes on motor fuels, for example, are often assigned to road construction. In principle, this arrangement is similar to exacting a price for services, the user tax being considered more convenient to collect than tolls.[18] If the earmarked taxes are not specifically related to use, the program is not self-liquidating in a meaningful sense; it has merely been assigned a preferred position in the budget.

A government project that provides to other government agencies services that would otherwise have to be bought from the private sector may be regarded as self-liquidating, particularly if formal arrangements are made for the using agencies to remit regular payments for the value of services received. The most usual example of this type of project is a building erected by one government agency or state enterprise and occupied by other government agencies.

The Swedish practice, for example, is to charge to capital account only that part of expenditures which is self-liquidating ("remunerative") by virtue of charges collected from the private sector or from other government agencies. For items that are partly self-liquidating, an immediate write-off against revenue account is taken for the portion of the cost which is not expected to be recovered. It appears that the same principles underlie the Ecuadoran system.

In a looser sense, self-liquidating expenditures are sometimes said to include outlays which are expected to give rise to an increase in the tax base and in revenues sufficient to recoup the original outlay over a period of years. The increase in the tax base would be due to an increase in private income produced with the aid of the publicly provided serv-

[18] Provision of road services could be regarded as analogous to a government enterprise with user tax receipts being assigned directly to the road administration and the general government accounts reflecting only transfers between the treasury and the road administration; or receipts from user taxes could be first entered in general receipts and then transferred to the road administration on the assumption that they are roughly equivalent to amortization and maintenance of roads.

ices or capital. It should be recognized, however, that in order to be self-liquidating by this standard an investment would have to bring about a very large increase in national income, relative to its cost, inasmuch as marginal tax rates on income as a whole are always well below 100 per cent. The identification of any investments satisfying this requirement would be very difficult, and it seems preferable to restrict the term "self-liquidating" to projects involving service charges, prices, or user taxes.

Capital receipts

The most usual receipts items in capital budgets are (1) surpluses transferred from the revenue budget, (2) proceeds of borrowing, (3) proceeds of sales of government property and repayment of loans, (4) depreciation allowances on fixed assets, representing transfers from the revenue budget, and (5) regular appropriations from the revenue budget.[19]

It is sometimes suggested that taxes which are paid out of private capital should be assigned to the capital budget. Although all taxes may come out of potential private savings to some extent and thus in a sense represent a transfer of capital to the government, death duties and capital levies are often considered to have this characteristic to a special degree and hence to be properly assignable to the capital budget. Denmark and the Union of South Africa, for example, assign receipts from death duties to the capital budget. The arrangement helps assure that the taxes in question will not reduce the total capital stock. The objective may imply either a social priority for capital formation as distinguished from consumption, or a desire to avoid interference with private choices regarding the division of the national product between consumption and investment.

In Ecuador taxes on gasoline and international telecommunications, as well as a school stamp tax and a portion of customs receipts, are allocated directly to the capital budget.

Implications for Aggregate Demand and Resource Allocation

Government capital budgeting has implications for fiscal policy and for aggregate demand, mainly because of the presumption that expenditures segregated in a separate capital budget will normally be financed in large part by borrowing. Special reliance on loan finance is not a

[19] The first two items are often considered means of financing a deficit in the capital budget rather than capital budget receipts in the strict sense.

necessary feature of the capital budget. A United Nations publication, which is generally favorable to the dual budget, states:

> . . . asset acquisition, taken by itself, is not an adequate justification for government borrowing, and a separation of current and capital accounts should not be undertaken for the purpose of rationalizing government debt creation. Rather, the separation of current and capital account transactions should be undertaken where it will facilitate proper management of government affairs and where it will contribute to an analysis of the economic significance of government activities. Such a classification should, however, never be taken as a fiscal policy guide, since the choice between financing from taxes or from borrowings must be based on purely economic considerations.[20]

The practices of most countries that maintain a separate capital budget, as distinguished from a purely informational tabulation of government investments, strongly suggest, however, that the arrangement ordinarily reflects the attitude that loan finance is more acceptable for capital outlays than for operating expenditures. Several of the considerations advanced in favor of capital budgeting imply that borrowing is a peculiarly appropriate means of financing capital outlays and should not be viewed in the same light as a deficit on current account. To be sure, governments often make a special effort to realize a current account surplus in order to cover a part of capital outlays during inflationary periods. Under a dual budget system, however, attention tends to be focused on the balance between revenue and expenditure in the operations budget, and the attempt to maintain a current account surplus often meets opposition. For example, the Minister of Finance of the Union of South Africa, in presenting the 1954–55 budget, took note of criticisms directed at the Government "for taxing the people in order to finance the loan programme [i.e., capital outlays]" and found it necessary to explain the considerations underlying the Government's policy.[21]

That the rule of loan finance for the self-liquidating portion of capital expenditures has the support of at least one eminent economist is shown by the following quotation from Professor Pigou:

> . . . consider government expenditure devoted to producing capital equipment—a national electricity plant, municipal gas works or tramways and so on—the fruits of which will subsequently be sold to purchasers for fees. Here it is generally agreed that the required funds ought to be raised by loans. If this is done, violent and sudden changes in tax rates are avoided: the people

[20] United Nations, Department of Economic Affairs, *Budgetary Structure and Classification of Government Accounts* (New York, February 1951), p. 12.

[21] The Minister stated that increased reliance on taxation was justified by the greater maturity of the economy and suggested that, in deciding the extent to which capital outlays should be covered by current revenue, the country should be guided by the availability of voluntary private savings and the degree of inflationary pressure (Union of South Africa, *Budget Statements, 1954–55* (Cape Town, 1954), pp. 12–13).

who benefit from the service which the new capital equipment renders pay for it in proportion to their use; and, provided, of course, that the fees charged are sufficient to wipe out the principal of the loan during the lifetime of the capital equipment, no additional taxation has ever to be raised on account of it. Upon this matter, as upon that of the proper method of finance for normal recurrent expenditure, there is no room for controversy.[22]

Critics of the capital budget argue that the appropriate relation between total government expenditures and taxation and borrowing should be determined in the light of general economic and monetary conditions rather than by reference to the composition of government expenditures. They emphasize that borrowing is ordinarily less anti-inflationary than taxing and conclude that a dual budget system, which relies on borrowing to cover a large part of capital expenditures, is likely to have an inflationary bias. As a subsidiary argument, some critics contend that a dual budget system, involving a mixture of cash and accrual items as well as transfers between the capital and current accounts, has the disadvantage of obscuring the relation between government income and outgo.

Although the proposition that borrowing is less deflationary than taxation is generally valid, some types of borrowing may approach taxation in this respect. The sale of long-term securities to the general public is usually the most deflationary type of borrowing. Borrowing from the commercial banks may also displace a considerable amount of private expenditures, particularly private investment, when the banks lack reserves in excess of the legal or customary minimum. Borrowing from the central bank, on the other hand, seldom decreases the availability of finance for the private sector and may even increase it by adding to commercial bank reserves.

The borrowing-spending combination will nearly always be more expansionary than an equal amount of taxing and spending, for two reasons: First, even when borrowing reduces private liquidity (or disposable funds) as much as taxation, it does not reduce private assets as taxation does. To the extent that private expenditures are a function of wealth as well as of liquidity or disposable income, private demand will remain higher with borrowing. Second, lending to the government is usually voluntary (although compulsory lending has occasionally been employed)[23] and lenders are likely to revise their private spending plans less extensively as a result of the transaction than are taxpayers, who are compelled to contribute to the support of government.

[22] A. C. Pigou, *A Study in Public Finance* (London, 3rd ed., 1949), p. 36. Pigou concedes that loan finance may also be appropriate for certain other nonrecurrent or irregular expenditures, but he does not suggest that any special attention should be given to the question whether they are capital items.

[23] A peacetime example is the system introduced in the Union of South Africa in the 1953–54 budget and abolished in the 1954–55 budget.

Opportunities for borrowing from the public are usually more limited in underdeveloped countries than in wealthy countries, because savings are low and financial institutions are not well developed. Inasmuch as many underdeveloped countries already exhibit a tendency toward chronic inflation, a government capital budget—by justifying increased reliance on loan finance, which in the circumstances is likely to come from an expansion of central bank or commercial bank credit—may have unfortunate consequences. In some countries, to be sure, observation of the rule that borrowing may equal, but not exceed, government net investment would call for less reliance on loan finance than has been customary. But in countries strongly inclined toward deficit spending, the prospects seem dim for establishing any simple budget balancing rule, whether related to a unified or to a dual budget.

When aggregate demand tends to fall below the full employment level, it is generally agreed that not all government expenditures need be met by taxation. Under these conditions, financing either capital outlays or current expenditures by borrowing may be helpful. It will, however, be only by accident that the amount of capital expenditure will be exactly equal to the gap between revenues and total expenditures that is appropriate to help ensure the maintenance of adequate total demand. Furthermore, the usual capital budget principles relate the maturity of the debt to the expected length of life of the asset and may suggest long-term borrowing at a time when less deflationary short-term borrowing would be preferable from the monetary viewpoint.

Under potentially inflationary conditions, it may not be feasible to cover all expenditures by taxation, and the government may find it advisable to resort to a comparatively deflationary type of borrowing, such as the sale of long-term securities to the general public. The size of the current expenditures, however, has only a political relation to the amount of taxation that can safely be raised, and the size of capital outlays is a poor measure of the need for deflationary borrowing.

It is possible to conduct a compensatory fiscal policy, designed to maintain an appropriate level of demand, within the framework of a dual budget. But decisions with respect to taxation and different types of borrowing would have to be made primarily by reference to the total of government expenditures and to conditions in the private sector. It is hard to avoid the conclusion that the division of the budget into current and capital accounts is to some extent an obstacle to compensatory policy. In particular, a dual budget system is likely to complicate the stabilization problem during periods of incipient or actual inflation.

The importance to be attached to the weakness of the divided budget from the standpoint of fiscal policy turns, to a considerable extent, on a judgment concerning the frequency with which deliberate compensatory

fiscal actions will be necessary. If market forces plus monetary policy and built-in flexibility of government revenues and expenditures are considered strong enough to bring about reasonable stability and high employment most of the time, the advantages of capital budgeting for resource allocation and administrative management may be given greater weight than the disadvantages from the point of view of countercyclical adjustments. If, however, very frequent countercyclical adjustments are expected to be required, the opposite evaluation may be reached. Furthermore, capital budgeting is likely to be considered more desirable by those who believe that an expansionary bias in the fiscal system is acceptable as a means of offsetting secular tendencies toward inadequate demand than by those who foresee a tendency toward secular inflation.

Measurement Problems

Given a dual budget system, what measures of government receipts, expenditures, and surplus or deficit should be selected for use in an analysis intended to shed light on the influence of government finance on aggregate demand and the monetary situation?

For this purpose, it is clear that comprehensive figures covering both current and capital accounts should be used. Regardless of their effect on the government's balance sheet, many capital expenditures and receipts have the same influence on aggregate demand and the monetary situation as current transactions. Some governments that maintain capital budgets recognize this and provide consolidated statements as a basis for discussion of fiscal and monetary policies. The Netherlands, for example, publishes a consolidated statement of capital and current receipts and expenditures as well as an analysis of cash transactions.

Suitable figures cannot be produced simply by adding together the totals of receipts and expenditures in the operations and capital budgets. It is necessary in most cases to make adjustments to eliminate double counting, intragovernmental transactions, and certain entries of a purely bookkeeping nature. In this category are two items that often bulk large in dual budget systems: depreciation accruals on government property and transfers between the operations budget and the capital budget. These items are ordinarily entered as expenditures in the operations budget and receipts in the capital budget. Computing government expenditures and receipts by merely adding together the operations and capital budgets will therefore overstate the totals but will not affect the balance between expenditures and receipts. A similar item that is sometimes involved in the dual budget system is rental

payments by government agencies for the use of buildings and other facilities owned by other government agencies.

Another phase of the preparation of comprehensive measures of government transactions is the treatment of state enterprises and trading departments. Owing to diversity of practices, this subject is especially important in international comparisons. Generally, it seems desirable to exclude from the consolidated statement of government receipts and expenditures the accounts of state-owned enterprises which derive their current receipts primarily from transactions with the public and which are accorded a large degree of autonomy from detailed treasury control of their operations. Railway and postal, telephone, and telegraph systems often fall in this category. In these cases the general government accounts would include in expenditures purchases of goods and services from the enterprise, capital subscriptions to it, and subsidies to cover losses; general government receipts would include dividends and interest paid to the treasury by the enterprise. Accounts of enterprises which deal mainly with government departments and which lack financial autonomy may properly be consolidated with general government accounts. Examples of such enterprises are organizations which construct buildings and lease them to government departments and various supply agencies. Admittedly, the application of these criteria leaves much room for differences of opinion. However, inasmuch as the subject is only marginally related to capital budgeting, it will not be considered in further detail here.

Certain items which are not related to the existence of a capital budget should be eliminated from the data if they have been included. The objective is to eliminate all entries which do not represent transactions between the consolidated government accounts, on the one hand, and the general public, including government entities which are not included in the consolidation, on the other. There are two general types of entry to be eliminated: (1) entries representing transactions between government accounts included in the consolidation—for example, transactions between the treasury and special accounts, such as social security funds—which inflate equally government revenue and expenditure (and therefore do not affect the surplus or deficit); (2) entries that affect the size of the surplus or deficit but do not represent cash transactions of the government with the public—for example, on the receipts side, profits from revaluation of government holdings of gold and foreign exchange, and, on the expenditures side, accrued but unpaid interest.

The treatment of public debt transactions and of additions to, and withdrawals from, reserve funds raises the question of the definition of the surplus or deficit. In actual usage, different definitions are em-

ployed, and the terms may have value-judgment implications. The predominant usage, however, assumes the elimination from government receipts of proceeds of borrowing and withdrawals from reserve funds, and the elimination from expenditures of repayments of the principal of debt and additions to reserve funds. The surplus or deficit is then taken to be equal to the difference between combined current and capital receipts and expenditures as adjusted.[24]

It may be questioned whether the surplus or deficit so defined is the most useful single measure of the contractionary or expansionary influence of the government's finances. The chief drawbacks are the failure of the figure to distinguish among receipt and expenditure items having rather different impacts, and the lumping together of the use of cash balances and all kinds of borrowing under "deficit" (and all kinds of debt repayments and additions to cash balances under "surplus"). For purposes of monetary analysis, some authorities would prefer to draw the line at a different point and to assimilate proceeds of long-term borrowing with taxation, and repayment of long-term debt with other expenditures.[25] They reason that long-term debt transactions, like taxes and expenditures, change the liquidity of the public and thus have a much greater influence on private consumption and investment than do short-term debt operations, which involve merely changes in the form of liquid assets. According to this view, the surplus or deficit should be a measure of the change in the liquidity of the private sector attributable to the government's budgetary policy. The surplus or deficit would equal the change in the government's short-term debt and cash balances.[26]

In order to minimize confusion, however, it seems best, particularly when writing for an international audience, to employ the broader definitions of surplus and deficit and to equate this item with the change in the government's total debt and cash balances (after suitable adjustments to eliminate noncash items). It may be helpful to characterize the figure as the "cash" surplus or deficit in order to distinguish it from other concepts. In some instances, the colorless and somewhat awkward phrases "excess of receipts" and "excess of expenditures" may be preferable. These phrases have the advantage of being comparatively unambiguous, and the preparation of the figures involves fewer ques-

[24] This is the practice followed by the International Monetary Fund in its *International Financial Statistics*, and by the United Nations in the compilation of statistics on "cash operations" published in its *Statistical Yearbook*. In the latter source, the difference between receipts and expenditures is called "balance."

[25] See, for example, Nederlandsche Bank, *Report for the Year 1953* (Amsterdam, 1954), pp. 58–59, and Government of India, Planning Commission, *The First Five Year Plan* (New Delhi, 1952), pp. 59–60.

[26] For a discussion favoring this definition over others, especially for underdeveloped countries, see K. N. Raj, "Definition and Measurement of Deficit Financing," *Indian Economic Review* (Delhi), August 1954, pp. 34–51.

tions of judgment, on which opinions will differ, than does the preparation of figures based on alternative concepts.

The principal adjustments that may be necessary to consolidate the operations and capital budgets may be summarized as follows:[27]

1. Receipts
   (a) Operations budget receipts
   Subtract:
   (i) Any proceeds of borrowing or withdrawals from reserve funds which may be included
   (ii) Noncash and intragovernmental items
   (b) Capital budget receipts
   Subtract:
   (i) Depreciation accruals as provided in operations budget
   (ii) Other transfers from operations budget, including initial capital subscriptions, reimbursements for capital losses, etc.
   (iii) Proceeds of borrowing
   (iv) Withdrawals from reserves and balances from prior years
   (c) Adjusted total receipts

2. Expenditures
   (a) Operations budget expenditures
   Subtract:
   (i) Depreciation accruals for government departments
   (ii) Other transfers to capital budget
   (iii) Repayment of debt
   (iv) Additions to reserve funds
   (v) Other noncash and intragovernmental items
   (b) Capital budget expenditures
   Subtract:
   (i) Repayment of debt
   (ii) Additions to reserve funds
   (c) Adjusted total expenditures

3. Cash surplus or deficit = item 1(c) minus item 2(c)

The cash surplus or deficit derived in this manner should be reconcilable with figures on changes in cash balances and in the public debt. In addition to making such a reconciliation, it is often helpful to introduce more detailed figures on the disposition of the cash surplus or the financing of the cash deficit, as well as other quantitative or qualitative information that may aid in the interpretation of bare summary figures.

[27] It is not intended to deal comprehensively here with questions relating to the scope of government budget accounts; hence no suggestions are offered on such questions as the adjustments necessary to incorporate properly the transactions of social security funds or other funds frequently unconsolidated in government budget accounts.

A distinction between long-term and short-term debt transactions may be especially illuminating when the country's monetary policy maintains a significant difference in the liquidity of the two kinds of securities. The distinction may not be meaningful, however, when the monetary authorities are vigorously supporting the price of long-term securities in order to prevent a rise in interest rates or when the government itself stands ready to redeem nominally long-term securities. These practices prevailed in a number of countries during and immediately after the war, and they tended to reduce or obliterate the difference between long-term and short-term debt.

Another classification of global figures that may be enlightening is that of government expenditures into (1) expenditures for newly produced goods and services, (2) purchases of existing physical and financial assets, and (3) transfer payments. Item (1) represents the direct exercise by the government of a claim on national output and constitutes in itself a part of aggregate demand. The other two items affect demand for the current final product only insofar as recipients of government payments use the funds to buy goods and services. Expenditures for newly produced goods and services are therefore usually more expansionary than purchases of existing assets and transfer payments.

In the present context, it is worth emphasizing that none of the classifications of financing items or of expenditures that are likely to be useful for measuring the impact of government finances on aggregate demand and monetary conditions will necessarily parallel the distinction between the operations and the capital budget. In some instances, capital budget receipts and expenditures will include long-term but not short-term debt transactions, but even in these cases other adjustments to current and capital accounts are likely to be necessary to develop the most meaningful summary figures.

Prices of Raw Materials in the 1953-54 U. S. Recession

Gertrud Lovasy*

DURING THE 1953–54 RECESSION, U.S. industrial production declined by about 10 per cent from the peak it had reached in the second quarter of 1953; but while the volume of total imports declined at roughly the same rate, wholesale prices as well as import prices (average values) advanced slightly.[1] The decline in the volume of imports was well in line with the developments that are usual when U.S. business activity slackens; there had been similar movements in previous recessions. But the failure of prices to decline was in sharp contrast to their customary behavior. As shown in Table 1, the decline in the volume of manufacturing production and of imports in the 1953–54 recession was roughly the same as in 1948–49, and much less severe than in 1937–38. Whereas the 1937–38 downturn affected imports in all major commodity groups, the decline in the volume of imports in the two postwar recessions was concentrated largely in raw materials; food imports do not appear to have been affected, and imports of manufactured goods declined only slightly.

The behavior of prices, however, differed sharply from that in 1937–38 and in 1948–49, and indeed from the customary pattern observed in most U.S. recessions. The U.S. wholesale price index and the unit value of imports advanced slightly, in contrast to the declines of 1937–38 and 1948–49. The rise in the over-all level of import prices, and to some extent also in wholesale prices, is partly accounted for by the sharp advance in coffee prices.[2] There were also some price increases in various groups of manufactured goods which, as a rule, are less sensitive than primary products to fluctuations in demand. The main divergence from the customary behavior of prices was in the comparative stability of the prices of industrial raw materials: the market price index (for sensitive commodities) declined no more than 5 per cent, compared with a

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[1] The present paper is a revised version of one delivered at the Annual Meeting of the Econometric Society in Detroit, Michigan, in December 1954.

[2] Coffee accounts for roughly 13 per cent of total imports; thus the steep rise in coffee prices had a strong effect on the import price level.

TABLE 1. PERCENTAGE CHANGES IN U.S. MANUFACTURING PRODUCTION, VOLUME OF IMPORTS, AND PRICES DURING THREE RECESSIONS[1]

Recession Period	Manufacturing Production	All Commodities			Industrial Raw Materials		
		Volume of imports	Wholesale prices	Unit value of imports	Volume of imports	Market prices[2]	Unit value of imports
1937–38....	−34	−39	−11	−13	−43	−30	−19
1948–49....	−9	−7[3]	−7	−7	−14	−20	−12
1953–54....	−10	−10	+1	+4	−19	−5	−2

[1] The figures refer to changes from the second quarter 1937, third quarter 1948, and second quarter 1953—upper turning points of manufacturing production—to the second quarter of 1938 and 1949, respectively—lower turning points—and the first quarter of 1954, which marked the leveling out of production. For sources of data on which this table is based, see Note at end of article.

[2] Market prices for sensitive raw materials; postwar data are based on daily price quotations for 16 commodities; prewar data are based on 8 commodities, including foodstuffs.

[3] Change from third quarter of 1948 to third quarter of 1949.

decrease of 20 per cent in 1948–49; and the unit value of raw material imports fell by only 2 per cent, against 12 per cent in 1948–49, although the decline in the volume of imports was greater than in 1948–49.[3]

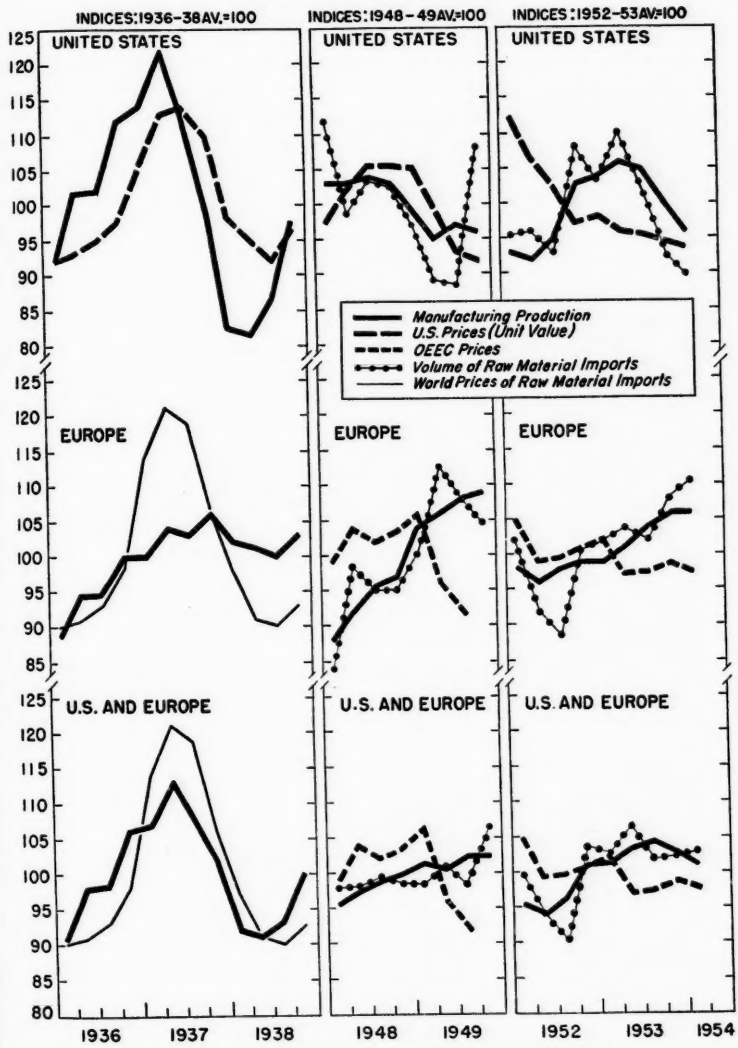
Data on U.S. manufacturing production, imports of raw materials, and prices of raw materials in the three periods, 1936–38, 1948–49, and 1952–54 (Chart 1), show the marked contrast between price behavior in the 1953–54 downturn and in the two previous recessions. The increases in production and in imports of raw materials[4] that preceded the declines in 1937–38 and 1948–49 were accompanied by rising prices, whereas subsequent price declines followed the downturn in production and imports with a delay of roughly one quarter. In 1948–49 prices declined more sharply than the volume of production and imports; in 1936–38 prices moved at a considerably slower rate, in both the upswing and the downswing.

The movement of prices in 1952–54 was entirely different. On the average, prices did not respond to either the rise or the subsequent decline in the volume of production and of raw material imports. From the peak reached after the outbreak of hostilities in Korea, prices moved downward almost without interruption through 1952 and into 1953.

[3] These comparisons are based on changes between the quarters indicated in footnote 1, Table 1; a different reference period would give a slightly different result, but any reference period would show an unusually slight reaction of raw material prices in 1953–54.

[4] The movement in the volume of imports prior to the downturn in 1948—a sharp decline in the first quarter followed by a moderate rise in the second—was distorted by very large withdrawals of wool from warehouses late in 1947. These withdrawals, which are recorded as imports, made for an exaggerated rise of raw material imports late in 1947 and a subsequent fall early in 1948.

CHART 1. INDICES OF MANUFACTURING PRODUCTION AND OF THE VOLUME AND PRICES OF RAW MATERIAL IMPORTS, UNITED STATES AND EUROPE, THREE RECESSION PERIODS[1]



[1] For sources and description of data, see Note at end of article.

In the second quarter of 1953, however, when industrial production and raw material imports started to decline, the fall in import prices was retarded.

The relative stability of raw material prices during the 1953–54 recession was not shared equally by all raw material markets. Prices of some individual commodities, notably rubber, declined sharply, while other prices increased. On the whole, however, changes in prices and unit values were moderate, both in absolute terms and in relation to the decline in the volume of manufacturing production and of raw material imports. A rough indication of the changes in price and in volume of the major U.S. raw material imports during both the 1948–49 and the 1953–54 recession is provided by Table 2. It should be noted, however, that the changes in the volume and unit values of imports, as well as in wholesale prices, shown in this table do not fully reflect developments for the individual commodities shown, since peaks and troughs in individual markets did not always coincide with those for the overall movement.

The atypical behavior of raw material prices in the period covering 1952 to mid-1954 was not confined to the U.S. market. The behavior of U.S. prices and of unit values of imports reflected, by and large, price developments in international raw material markets, as indicated by four price indices compiled by the UN Statistical Office and the Organization for European Economic Cooperation (OEEC). Table 3 shows that the four series moved fairly closely together; such divergent movements as there were are easily explained by differences in the composition and weights used in the indices. Moreover, the index of U.S. spot market prices, which covers both domestic and imported materials, reflects freight charges for the latter; the world index compiled by the UN assigns roughly half of its weights to f.o.b. quotations and half to c.i.f.; and both the OEEC index for imported raw materials and the index of the unit value of U.S. imports are on an f.o.b. basis.

The Main Determinant of Prices of Raw Materials

Both theoretical considerations and empirical evidence strongly suggest that, in the short run, the level of U.S. manufacturing production is the main factor determining the course of raw material prices in the U.S. and other open markets. This is due mainly to the fact that the United States is the largest consumer of industrial raw materials offered on world markets, if—as is proper—the supplies produced and sold by

TABLE 2. COMPARISON OF U.S. RAW MATERIAL IMPORTS AND PRICES IN TWO RECESSIONS[1]

	Percentage of Total Raw Material Imports in 1953	Percentage Change from Third Quarter of 1948 to Third Quarter of 1949			Percentage Change from Second Quarter of 1953 to First Quarter of 1954		
		Volume of imports	Wholesale prices	Unit value of imports	Volume of imports	Wholesale prices	Unit value of imports
Total raw materials	100	−14	−20	−11	−19	−5	−3
Nonferrous metals	25.5	−3	−16	−9	−21	−7	−9
Petroleum and products	14.5	+10	−2	0	−5	+10	+10
Rubber	6	−23	−27	−20	−21	−17	−23
Wool	5.5	−45	−8	−10	−36	0	+1
Woodpulp	5	−27	−16	−23	−12	+1	0
Lumber	4.5	−30	−13	−15	−9	−5	−5
	61.0						

[1] Based on data of the U. S. Department of Commerce and the U. S. Department of Labor.

Petroleum and products: changes in price and unit value refer to petroleum only. The 1953–54 price increase of 10 per cent occurred in June 1953. *Wool:* the 1953–54 change in the volume of imports refers to changes from the first half of 1953 to the first half of 1954. The price data refer to domestic wool; the figures under unit value refer to U.S. wholesale prices for imported wool. *Lumber:* the 1953–54 change in the volume of imports refers to changes from the first half of 1953 to the first half of 1954; the 1948–49 change is between April–September 1948 and April–September 1949.

TABLE 3. PERCENTAGE CHANGES IN INDICES OF RAW MATERIAL PRICES IN U.S. AND INTERNATIONAL MARKETS, FIRST QUARTER 1952–SECOND QUARTER 1954[1]

(*Percentage change from previous quarter*)

Area Covered	1952				1953				1954	
	I	II	III	IV	I	II	III	IV	I	II
World (UN index)	−4	−10	−3	−1	−1	−3	0	−1	+1	+1
U. S. (spot market prices)	−8	−10	−3	−3	−3	−4	−2	−3	0	+5
OEEC countries (imports)	−6	−6	+1	+1	+1	−4	0	+2	−1	...
U. S. (import unit value)[2]	−5	−6	−3	+1	−2	0	−1	−1	−1	0

[1] For sources of data on which this table is based, see Note at end of article.

[2] Lagged by one quarter.

the United States domestically or for export are included.[5] U.S. industry absorbs a considerable part—roughly one fifth to one fourth—of the total raw material exports of other countries. Since, with some minor exceptions, industrial raw materials are not subject to quantitative import restrictions, domestic and import markets are closely interrelated and, in view of the great weight of U.S. demand in raw material markets, both domestic and import prices as a rule react strongly to changes in U.S. demand. The same applies, *mutatis mutandis*, to the prices of those raw materials for which practically all the U.S. demand and, in addition, a considerable part of foreign demand are met from U.S. sources. Here changes in U.S. demand affect immediately only the domestic price; the link with competing markets is provided by U.S. exports at the domestic price, which transmit the effects of U.S. demand fluctuations to prices in competing markets.

The prominent share of the United States in total consumption and trade of industrial raw materials suggests that U.S. demand for industrial raw materials is the most significant single factor determining short-run developments of raw material prices both in the U.S. and international markets. Statistical data covering the years 1929–38 support this view. Chart 2 and Chart 3, Part A, in which quarterly data on U.S. manufacturing production are linked to "world" prices of raw materials and to the unit value of U.S. raw material imports, show a fairly close correlation between U.S. manufacturing production and each of the two price series.[6] The fact that prices moved in the same direction as manufacturing production indicates that raw material demand determined prices, and not vice versa. The correlation between U.S. production and world prices for raw materials for the period 1928–38

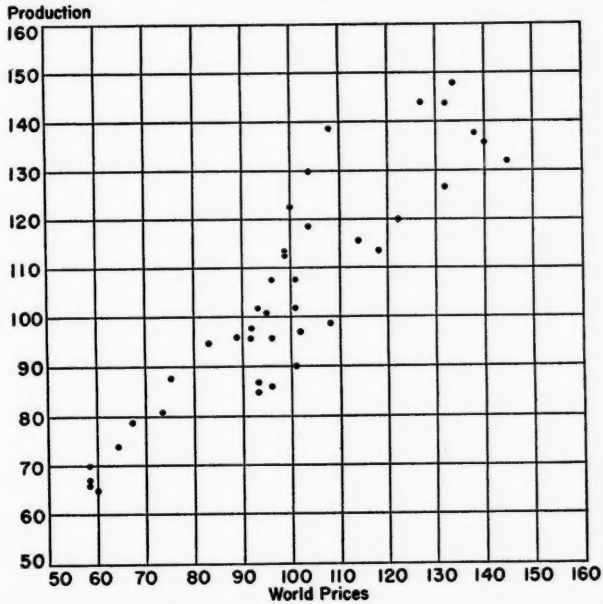
[5] The United States produces well over 50 per cent of the world's manufactured goods, according to data used by the UN (*Monthly Bulletin of Statistics*, April 1954) as weights for its world manufacturing index. The weights are based on "value added in manufacturing industries" of the world, excluding the U.S.S.R., China, and the European satellite countries.

The U.S. share in the world's industrial use of raw materials is probably smaller than its share in world manufacturing production, since "value added" in the United States is largely the result of advanced processing by industries whose raw material component is considerably smaller than that in the preponderantly basic industries in some other parts of the world.

[6] The same applies to a third price series—prices for industrial raw materials on the U.K. market (Sauerbeck index). The three price series differ in both composition and weights; moreover, only the unit value of U.S. imports was originally based on dollar prices. The "world" index as published is calculated on the basis of gold prices and, as used in Chart 2, was roughly converted to a current dollar basis. The Sauerbeck index is based on sterling quotations. The devaluations and fluctuating rates during the 1930's and their effects on prices are, in part, responsible for any price movements not in line with U.S. manufacturing production.

CHART 2. RELATION BETWEEN U.S. MANUFACTURING PRODUCTION AND WORLD PRICES OF RAW MATERIALS, QUARTERLY, 1929–38[1]

(*Indices, 1928–35 av. = 100*)



[1] For sources and description of data, see Note at end of article.

was not improved by using a combined index of production for the United States and Europe instead of the U.S. series alone.[7]

Postwar data indicate a very weak correlation between U.S. manufacturing production and the unit value of U.S. imports, mainly because of the atypical price behavior since the middle of 1952. Other series available for the postwar period, such as the U.S. spot market price index, yield no better results.

Theoretical considerations suggest that the behavior of prices of raw material imports (unit value of imports) can be explained more

[7] The correlation, based on annual data for 1928–38, gave the following results:
Based on U.S. production only:

$$X_{1a} = 25.5 + 0.951X_2 \qquad r = 0.883$$

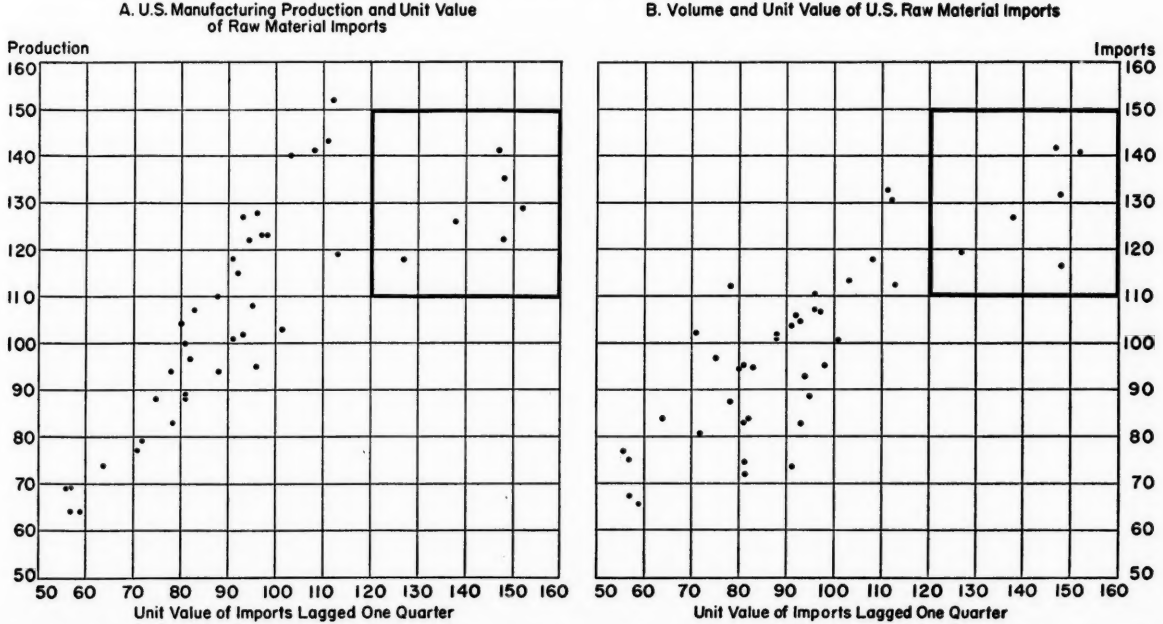
Based on U.S. plus European production:

$$X_{1b} = 44.3 + 0.767X_2 \qquad r = 0.849$$

where X_{1a} and X_{1b} stand for U.S. and combined production, respectively, and X_2 for raw material prices.

CHART 3. RELATION BETWEEN U.S. MANUFACTURING PRODUCTION, VOLUME OF RAW MATERIAL IMPORTS, AND PRICES[1]

(Indices, 1928–35 av. = 100)



[1] Based on quarterly data, fourth quarter 1928–first quarter 1939. For sources and description of data, see Note at end of article.

satisfactorily by changes in the U.S. demand for raw materials (represented by manufacturing production) than by the demand for imported raw materials (represented by the volume of imports). First, the demand for imported materials depends primarily on the total demand for raw materials, and shifts of the import demand schedule can be traced, as a rule, to underlying shifts (in the same direction) of the total raw materials demand schedule. Thus manufacturing production provides the ultimate explanation for changes in prices of raw material imports as far as they result from shifts in the demand schedule. Second, shifts in the foreign supply schedule, e.g., through the alteration of exchange rates, tend to bring about an expansion or contraction of imports, foreign materials being substituted for domestic, or vice versa. Manufacturing production, however, will hardly react to a shift in the foreign supply schedule, partly because the effect of the latter on the total supply schedule (for foreign and domestic materials) is comparatively small and partly because total demand—in contrast to import demand—is highly inelastic. Consequently, while shifts in the foreign supply schedule make imports an imperfect representative of demand for imported raw materials, they do little to impair the adequacy of production as an indicator of the influence of total demand on prices.

Statistical support for this view is provided by the correlation of prewar data for both U.S. manufacturing production and volume of imports of raw materials with the unit value of raw material imports (Chart 3).[8] Since no satisfactory correction could be devised for the sharp deflationary trend in the early 1930's, which kept world prices for all commodities throughout the 1930's well below their level in 1929 and early 1930,[9] the correlations are confined to the period from the second quarter of 1930 to the first quarter of 1939. For that period, the correlation between production and import prices is significantly closer than the correlation between the volume of imports and import prices.[10]

[8] The first reason given above for the superiority of total demand over import demand as an explanation of movements in import prices cannot be supported by correlation analysis: a rise or fall in import prices resulting from corresponding shifts in total demand and demand for imports will be positively correlated with both manufacturing production and the volume of imports. Changes in the foreign supply schedule, however, which affect import but not total demand, may result in a negative correlation of import volume and prices, but would not interfere with the positive correlation of manufacturing production and import prices.

[9] See the observations set off in "squares" in Chart 3, which are conspicuously out of line with the rest of the observations shown.

[10] $r = 0.91$ for production and import prices, 0.76 for import volume and import prices. The production index is the one used by G. Lovasy and H. K. Zassenhaus in "Short-Run Fluctuations in U.S. Imports of Raw Materials, 1928–39 and 1947–52," *Staff Papers*, Vol. III, No. 2 (October 1953), pp. 270–89, which excludes industries not using imported raw materials; the index is not adjusted for seasonal variation. In both correlations, the unit value of imports has been used with a one-quarter lag; although there is no discernible lag between production and the volume of imports (see the 1953 study), the unit value of imports shows a clear lag with respect to both production and imports.

For the postwar period, as shown above, both correlations are very weak, and the difference between the result for production and the unit value of imports and that for import volume and unit value is insignificant.

Moreover, in the three periods, late 1931, late 1933, and the fourth quarter of 1949—which followed devaluations that altered the exchange rates between the U.S. dollar and the principal foreign currencies and thus altered the supply curve of the outside world expressed in dollars—U.S. manufacturing production showed a positive correlation with U.S. import prices, while the volume of raw material imports moved in the opposite direction.

Other Factors Affecting Prices of Raw Materials

Although U.S. demand is a strong force in determining world prices for raw materials, it is not solely responsible for their course; its effects may be reinforced or counteracted by other demand or supply factors or, alternatively, by deliberate action or other conditions preventing the response of prices to demand and supply developments.

Demand from other countries, primarily from European industrial countries, is a significant factor. Even if this demand and its primary source, manufacturing production in these other countries, are to some extent dependent on economic activity and production in the United States, the rate of rise or fall in European production and raw material demand may modify the course of raw material prices that is expected as a result of production developments in the United States. An occasional divergent movement of European production could, obviously, have a similar effect.

In the postwar years, demand for the U.S. strategic stockpile has been added to current demand for manufacturing purposes, and it has sometimes reinforced, and sometimes reduced, the effects of industrial demand on raw material prices.

Changes in supplies other than those which result from deliberate action intended to influence prices are, as a rule, not likely to be sufficiently important in the short run to have a strong influence on prices of raw materials as a group, although they do affect prices of individual commodities, especially agricultural products. But a general rise in output, which was a delayed response to the sharp rise in prices in 1950 and 1951, was responsible for the continued price decline during the period of expanding manufacturing production from mid-1952 to mid-1953. Another strong factor in determining the course of prices, however, may be deliberate action (including restrictions of supply by either

controlling output or holding stocks) to insulate prices from the effects of current market developments. Such action in various forms contributed greatly to the comparative stability of raw material prices in 1953–54.

Speculative influences affecting the timing and quantity of purchases and sales may cause movements not explainable by demand and supply factors. In 1949, for instance, the expectation of lower exchange rates may have reinforced the price decline caused by the U.S. recession. In the early part of 1953, the Korean armistice negotiations and the anticipated reduction in purchases of strategic materials were, to some extent, responsible for the sustained price decline in that period, despite rising industrial activity and increased imports.

Europe's demand for raw materials

The increase in European production and imports of raw materials after the middle of 1953 has been repeatedly mentioned as a major, if not the major, reason for the comparative stability in the general level of raw material prices during the U.S. recession. Examination of the combined effects of U.S. and European demand for raw materials[11] over a number of years and, in particular, for the three periods 1936–38, 1948–49, and 1952–54 suggests, however, that the rise in European demand in 1953, though a contributing factor, would not have sufficed by itself to keep raw material prices stable.

Total consumption of industrial raw materials by European countries is probably about three fifths of industrial raw material consumption in the United States, if manufacturing production in the two areas can be accepted as a satisfactory guide.[12] Because of the high degree of Europe's dependence on imported raw materials, the relation between manufacturing production and imports is bound to be very close[13] and, as indicated in Table 4, European imports of raw materials far exceed those of the United States.

The effects of European and of U.S. demand on raw material prices may be gauged by comparing price movements with U.S. demand for

[11] As represented by manufacturing production or, alternatively, by the volume of imports of raw materials of the two areas.

[12] According to UN data based on "value added by industry," Europe (excluding the Soviet bloc) was responsible for 34 per cent of world manufacturing production in 1950–53, and the United States for 54 per cent. Data on consumption of major raw materials in the two areas (see Table 4) suggest fairly similar percentages.

[13] This is confirmed by comparing quarterly changes in manufacturing production and in raw material imports for the United States and for the OEEC group for the years 1949–53. For the United States, the average change in production of 10 per cent was accompanied by a 16 per cent change in raw material imports; the corresponding variations for the OEEC group were 8 per cent and 9 per cent.

TABLE 4. VALUE OF CONSUMPTION AND OF IMPORTS OF SELECTED RAW MATERIALS BY THE UNITED STATES AND OEEC COUNTRIES, 1952[1]

(Value figures in billions of U.S. dollars)

Raw Material	Consumption[2]		Imports		Imports as Per Cent of Consumption	
	U.S.	OEEC countries	U.S.	OEEC countries[3]	U.S.	OEEC countries
Nonferrous metals[4]	2.1	1.6	1.25	1.3	60	80
Crude oil	6.0	1.6	0.45	1.5	8	95
Wool	0.5	1.2	0.38	0.9	75	80
Cotton	1.7	1.2	0.03	1.1	2	85
Rubber[5]	0.8	0.5	0.6	0.5	65	95
Woodpulp	2.5	1.0	0.3	0.2	11	20
Total	13.6	7.1	3.0	5.5	20–25	75–80

Sources: Organization for European Economic Cooperation, *Statistical Bulletins* (Paris); U.S. Department of Commerce, *Survey of Current Business* (Washington) and statistics on foreign trade.

[1] The imports listed represent some 60 per cent of total raw material imports of the United States and of Europe.

[2] Based on volume data, valued at 1952 prices.

[3] Imports, excluding trade within the area, roughly adjusted to an f.o.b. basis.

[4] Copper, tin, zinc, lead, aluminum, and nickel.

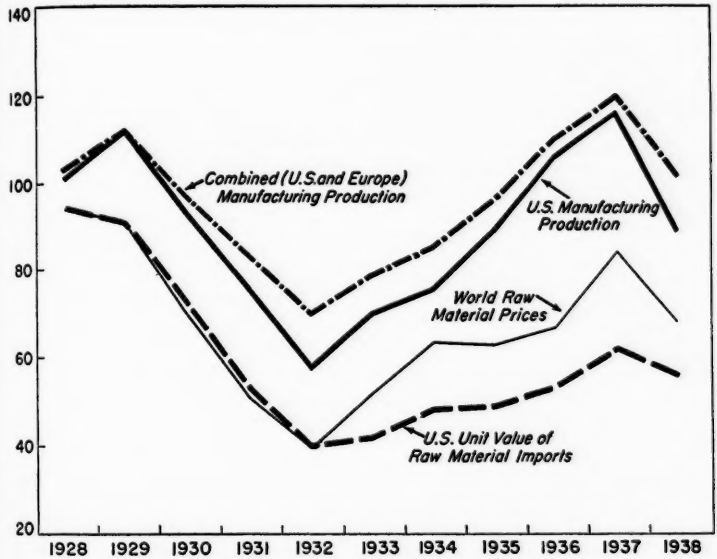
[5] Including synthetic rubber.

raw materials and with the combined demand of the United States and Europe. The volume of manufacturing production in the two areas is again taken as representing demand for raw materials; in addition, for the postwar years, data on raw material imports have been used. The U.S. unit value of raw material imports is used as an indicator of prewar prices of raw materials. For postwar years, both U.S. unit values and the OEEC price index for imported raw materials, supplemented for 1948 and 1949 by a similar index computed by the Economic Commission for Europe (ECE), have been used; these series move fairly closely together, occasional divergences being explained either by differences in the composition of imports or by the effects of different influences in the two areas.

Data for 1928–38 and for 1948–54 (see Charts 4 and 5) indicate that during most years, both prewar and postwar, combined U.S. and European production followed closely the movement of U.S. production. The close relation between the two series is not surprising, in view of the pronounced effect of U.S. economic activity on activity in other countries. With the exception of the persistent price decline during 1928–29, when output was increasing sharply, prices in the interwar period followed, by and large, the movements of the two production series. During the great depression of the early 1930's and the subse-

CHART 4. INDICES OF MANUFACTURING PRODUCTION AND OF RAW MATERIAL PRICES, ANNUALLY, 1928–38[1]

(1925–29 av. = 100)



[1] For sources and description of data, see Note at end of article.

quent recovery, the two production series moved closely together; either one of them would be satisfactory for interpreting the movement of raw material prices.[14] In the 1937–38 recession, however, the decline in production in the two areas combined was considerably milder than the U.S. decline, and it may be argued that the decline in prices, obviously caused by developments in the United States (see Chart 1), was moderated by continued strong demand in some European countries.[15]

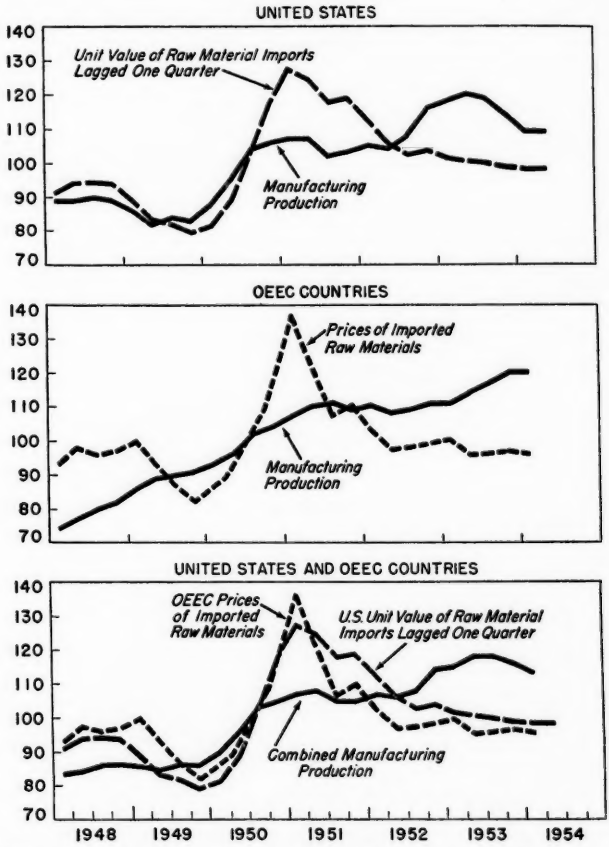
During most of the period from 1948 to the early part of 1954, the U.S. and the combined production series, and also the two price series

[14] See also footnote 7 above. A number of additional factors, including a series of consecutive devaluations, influenced the course of prices in the 1930's and were responsible for the fact that prices (in terms of U.S. dollars) rose at a slower rate than manufacturing production.

[15] European production in that period fell only slightly, hardly reflecting the impact of the brief but severe U.S. recession. The high level of European production was primarily the result of rising output (armament drive) in Germany, which spread to some other continental European countries.

CHART 5. INDICES OF MANUFACTURING PRODUCTION AND OF PRICES OF IMPORTED RAW MATERIALS, FIRST QUARTER 1948–FIRST QUARTER 1954[1]

(1948–53 av. = 100)



[1] For sources and description of data, see Note at end of article.

used[16] (see bottom section of Chart 5), moved closely together. However, except for the period preceding the Korean conflict, when prices followed changes in U.S. production (and imports), neither the U.S.

[16] The unit value for U.S. raw material imports and the OEEC (linked with the ECE) price index for raw materials imported by the OEEC group.

nor the combined production (or import) series provides a satisfactory explanation for the course of prices. The two years following the outbreak of the Korean hostilities may be neglected, since the main reason for the sharp increase and subsequent collapse of raw material prices during that period (the steep but short-lived rise in U.S. and European demand) was unrelated to production changes in the two areas and, in view of supply limitations, was only faintly reflected in the volume of imports.

Developments in 1948–49, however, are of particular interest since the brief U.S. recession in that period was accompanied by a steady rise in European manufacturing production (and imports), which caused the combined production (and import) curve to remain almost stable; nevertheless, prices followed the decline of U.S. production and imports. The apparent failure of continuously rising European demand for raw materials (as indicated by both manufacturing production and the volume of raw material imports) to prevent raw material prices from declining probably was due to a number of special circumstances. The ready response of prices to the decline in U.S. demand may have been promoted by the special efforts of raw material exporters to maintain, if not to expand, sales to the United States. During that period, expansion in European manufacturing production was, at least in some instances, conditioned by ability to purchase raw materials in foreign markets. In contrast to later developments, government trading in those years not infrequently made possible purchases of raw materials at favorable prices, and a period of slackening U.S. demand may have offered opportunities to strike bargains. Thus, the rise in European demand may have been partly induced by the drop in raw material prices. The main source of the strength of European demand, however, was the increase in U.S. aid during the period.[17] Europe's additional raw material imports were secured largely from the United States[18] where, on account of reduced domestic demand, stocks had been growing and the rise in exports to Europe was not strong enough to stop the decline in prices.[19] Toward the end of the recession, the expectation of further price reductions through devaluation may have kept U.S. demand in check and thus contributed to the continued weakness of prices.

Thus, the fact that rising European demand did not prevent a decline of raw material prices in 1948–49 can be attributed to special conditions;

[17] U.S. aid to Europe rose from $1.3 billion in the first half of 1948 to $1.6 billion in the second half of 1948 and to $2.2 billion in the first half of 1949.

[18] A considerable proportion of additional European imports consisted of cotton bought with Economic Cooperation Administration funds in the United States.

[19] Data on output of primary products do not suggest that rising supplies contributed to the decline in raw material prices in 1948 and 1949.

it does not preclude the possibility that, in the 1953–54 recession, prices may have been strengthened by increasing activity and import demand in Europe. Conditions in 1953–54 were different from those in 1948–49. The steady expansion of European manufacturing production was based on rising domestic and foreign demand for European products and not, as in 1948–49, on recovery from a previous low (postwar) level, sustained by U.S. aid. Import demand for raw materials was not "price induced" but, in spite of firming prices, it continued strong, thus contributing further to the strength of prices. Developments in some individual commodity markets seem to support this view. To recognize European demand as a contributing factor does not mean, however, that it can be regarded as *the* explanation of the price changes. First, the rise in European activity was not strong enough to prevent a decline in manufacturing output (and imports) in the two areas combined (see Chart 1).[20] Second, the preceding substantial rise in production (and imports) in each area did nothing more than slow down the downward trend of prices. This downward trend was due largely to the expansion of supplies after the outbreak of Korean hostilities; the firmness of prices after mid-1953 is attributable mainly to deliberate action by governments and producers.

Demand for stockpiling purposes

In the period immediately following the Korean conflict, rising U.S. demand for materials for stockpiling purposes no doubt added to the pressure of commercial demand for raw materials and contributed to the sharp rise in prices.[21] In more recent years—at least during part of the time—stockpiling (as indicated by new obligations incurred and actual expenditure, shown in Table 5) and commercial demand for raw materials (as indicated by manufacturing production) have moved in opposite directions, which may have been part of the reason for the atypical price changes.

Purchases for the stockpile continued to rise through 1952, but in the first half of 1953, when manufacturing activity and raw material imports reached their peaks, substantial cancellations of stockpiling obligations may have contributed to the continued decline in raw material prices. The subsequent downturn in industrial activity and im-

[20] The index of the volume of imports shown in Chart 1 has not been corrected for seasonal variations; if seasonal changes had been eliminated, the minor rise in the combined import volume after the third quarter of 1953 would disappear.

[21] The significance of stockpile purchases may be gauged by comparing them with the value of raw material imports. In 1952, when purchases were at a peak, they amounted to roughly one fifth of the value of raw material imports. This statement is not intended to imply, however, that all or most of the materials entering the stockpile were imported.

TABLE 5. OBLIGATIONS INCURRED AND ACTUAL EXPENDITURE UNDER THE U.S. STOCKPILING PROGRAM, 1947–FIRST HALF 1954

(In millions of U.S. dollars)

Date	Obligations Incurred	Actual Expenditure
1947	152	32
1948	540	151
1949	350	456
1950	831	455
1951	2,233	744
1952		
1st half	360	496
2nd half	382	490
1953		
1st half	−130[1]	416
2nd half	16	302
1954		
1st half	100	342

Source: Office of Defense Mobilization, *Stockpile Reports to Congress* (Washington).

[1] Negative figure indicates net cancellations.

ports was at first accompanied by a virtual standstill in new obligations and a decline in expenditure for the stockpile; thus, up to the end of 1953 stockpiling operations had played no apparent role in retarding the decline of raw material prices. Early in 1954, however, stockpiling operations were reactivated; both new obligations and actual expenditure rose. Stockpiling policies were gradually geared toward deliberate efforts to stabilize the economy, the prices of nonferrous metals being primarily affected.

CHANGES IN SUPPLIES

The continued, though moderate, downward movement of U.S. import prices during the 12 months from mid-1952 to mid-1953, when manufacturing production and raw material imports in the United States and Europe were rising, was to a considerable extent the result of a growing abundance of raw material supplies. Primary production, both mining and agricultural, had been steadily expanding, mainly because of high prices, as a result of the Korean conflict, and the apparent prospects for a continued strong demand. Although prices had declined from their peak in the first part of 1951, they remained sufficiently high to stimulate further expansion of output; moreover, government support policies in a number of primary producing countries actually maintained, for some time, producers' prices at or near their peak figures. The Korean conflict and the extensive drive for rearmament, as well as the accumulation of strategic stockpiles, seemed to

assure markets for an increasing flow of raw materials. Persistent shortages lasting well into 1952 supported these expectations. In the course of 1952, however, supply caught up with—and in some instances tended to exceed—current demand. The slump in the textile industry, coupled with the gradual abandonment of support programs and the release of stocks, made for overabundant supplies of textile raw materials. The gradual termination of voluntary allocation schemes under the International Materials Conference (IMC) marked the transition from shortages to ample supplies for a number of materials, mainly metals and minerals. Primary production continued to expand along with the rise in manufacturing output well into 1953, and the supply of various primary products rose faster than demand.

These developments were largely responsible for the continued fall in raw material prices, in spite of demand being strong up to the middle of 1953. But primary production remained high and, in some instances, even continued to increase. Thus, supply conditions do not offer a clue for the relative stability of prices during the U.S. recession; instead, they suggest that some other factors, more powerful even than rising European demand, must have operated to maintain this stability.

Deliberate action to influence prices

The behavior of prices during both the rising and the declining phase of the short 1953–54 cycle was, in fact, decisively influenced by deliberate action designed to modify the effect of current market developments on prices.

During the upswing, various controls imposed earlier were still maintained; for certain materials, allocation under IMC continued into the first part of 1953, although some of the schemes had been terminated earlier as supplies became more plentiful. Although price ceilings in the United States, which had been introduced early in 1951, were relaxed in some instances to permit imports, and were no longer effective in other instances as prices had fallen below the ceiling, they were nominally maintained well into 1953 and made for cautious buying by U.S. importers.

Action to prevent a further decline of prices during the recession was less comprehensive and less uniform than the earlier controls imposed to counteract price increases. The general trend in both the United States and Europe was toward decontrol and freedom of trade in primary products. Price control in the United States had ceased before the onset of the recession, and developments in Europe, including the relaxation of discriminatory import restrictions and the reopening of

the London commodity markets,[22] were steps in that direction. With the notable exception of the U.S. agricultural price-support program, the measures that kept raw material prices relatively stable were not part of any general policy designed to achieve that end. They consisted of a variety of independent measures taken by producers or by governments in individual commodity markets—marking up and maintaining administered prices, output restrictions, or carrying stocks.

Although price stabilization through the U.S. agricultural support program affects primarily foodstuffs, it was also responsible, despite large surpluses, for maintaining cotton prices, and it may have had some effect on wool prices. Prices in two important markets were raised early in the summer of 1953 by the action of U.S. producing firms: steel prices were increased by 15 per cent and crude oil prices by 10 per cent. These new levels were maintained in spite of the subsequent sharp decline in steel consumption and the weakness in the markets for some refinery products. The decline in nonferrous metal prices was checked by a series of different and independent steps in some of the main producing and consuming countries.

These individual and mostly uncoordinated policies had a pronounced effect on raw material prices in general, not only because they affected a considerable number of commodities, but also because the impact of the recession fell most heavily on sectors where prices can more easily be stabilized while certain sensitive markets (building materials, woodpulp) were affected very little or not at all.

Price Developments in Individual Markets

The effects of the various factors listed above are illustrated in some detail in the following brief survey of price changes in a number of major commodity markets. Commodities have been selected for examination in accordance with their significance in international trade; they account, together, for nearly two thirds of the total raw material imports of the United States and the OEEC group.

Nonferrous metals

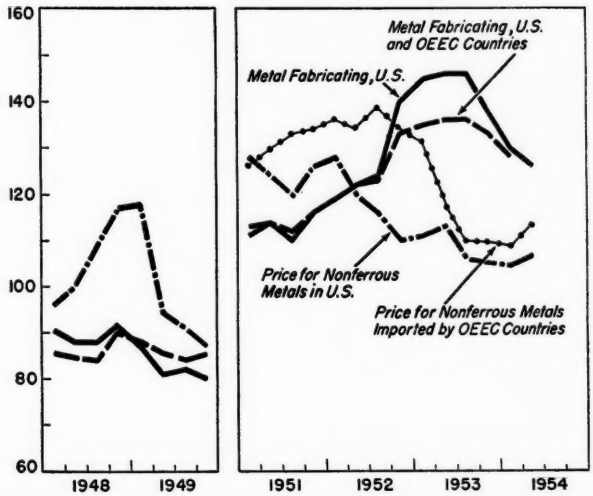
From 1948 to 1954, prices of nonferrous metals moved in roughly the same way as prices of industrial raw materials in general. Up to the

[22] The release of stocks held by the U.K. Government as trade was returned to private channels had, in some instances, led to temporary oversupply and declining prices. Subsequently, the Government adopted a policy of gradual stock releases, to avoid depressing effects on prices.

early part of 1952, they showed a fairly close dependence on production of the U.S. metal-fabricating industry;[23] thereafter they moved without any apparent connection with production, declining heavily while production rose up to the second half of 1953, and becoming stable when production declined (Chart 6).

CHART 6. INDICES OF METAL FABRICATING AND OF PRICES OF NONFERROUS METALS, QUARTERLY, 1948–49 AND 1951–SECOND QUARTER 1954[1]

(*1950 av. = 100*)



[1] For sources and description of data, see Note at end of article.

In the 1949 downturn, prices of nonferrous metals were among the most sensitive: the decline of about 12 per cent in U.S. metal manufacturing was followed, one quarter later, by a price decline of 23 per cent.[24] The simultaneous steady rise in European manufacturing output did not prevent prices from responding to the decline in U.S. demand. The

[23] Metal fabricating covers fabricated metal products (structural parts, furnaces, tin cans, etc.), machinery (electric and other), and transportation equipment; it amounts to almost one third of total U.S. manufacturing production (the weight in the manufacturing index of the Board of Governors of the Federal Reserve System is 31.7 per cent).

[24] This refers to the decline in U.S. prices from the first quarter to the third quarter of 1949; the unit value of imports in that period fell by only 15 per cent. Prices of nonferrous metals imported by Europe are not available for that year on a quarterly basis.

combined index of metal fabrication for both areas declined only slightly and was no more closely correlated with the behavior of nonferrous metal prices than was U.S. production alone.[25]

Through 1950 and 1951, prices of nonferrous metals followed, by and large, the course of metal manufacturing in both areas, although the price fluctuations were more sharp owing to the rise in speculative demand resulting from the Korean conflict and to limited supplies. As pointed out above, the decline of U.S. domestic and import prices in the first half of 1951 and the moderation of the subsequent upturn were mainly the result of price ceilings imposed in the United States early in 1951 and maintained well into 1953, and of the allocation of supplies under the IMC, which was carried out voluntarily as long as demand, for both industry and strategic stockpiling, threatened to outrun available supplies.

Early in 1952 prices of nonferrous metals began to weaken, and from mid-1952 to the third quarter of 1953 they declined sharply, while metal manufacturing, primarily in the United States, again increased substantially. This atypical price behavior was the result of steadily increasing supplies and a rise in demand more moderate than the sharp increase in manufacturing seems to suggest. The rapid expansion of metal manufacturing between 1950 and 1953 in both the United States and Europe developed without any appreciable rise in consumption of nonferrous metals, which, except for aluminum and some other light metals used in the aircraft industry, was not greater than in 1950. Production of lead and zinc caught up with demand early in 1952; allocation was discontinued as supplies became more than abundant and prices fell sharply.[26] U.S. resistance to high tin prices (imports virtually stopped during 1951 and were resumed under a series of contracts in 1952) was partly responsible for the decline in tin prices. Copper remained in comparatively short supply up to the early part of 1953, but prices were kept in check by allocation under IMC and by U.S. price control. Later in the year supplies became plentiful. Prices for aluminum, which are administered strictly, were raised in mid-1952 from 19 cents to 20 cents per pound and again, in the early part of 1953, to 21 cents.

At the onset of the U.S. recession, production of all nonferrous metals had more than caught up with demand, U.S. controls and international

[25] The 1948–49 series shown in Chart 6 are not corrected for seasonal variations; from the fourth quarter of 1948, when production was at its peak, to the fourth quarter of 1949, the combined index declined by about 5 per cent, and the U.S. index by about 13 per cent.

[26] The early decline in the index of U.S. prices of nonferrous metals (Chart 6), compared with the unit value of imports and with OEEC import prices, reflects the sharp drop in zinc and lead prices, as the weights for these two metals in the U.S. index are greater than in the other two indices.

allocation had been discontinued, import restrictions in Europe had been greatly relaxed, and the London metal markets had been reopened. Metal fabricating in the United States reached a peak in the second quarter of 1953, remained high in the third quarter, and then declined sharply in the last part of the year. In contrast to the very minor increase in consumption during the rising phase of production, consumption in the downturn declined considerably;[27] yet prices for nonferrous metals remained stable, and in the second quarter of 1954 they even showed some tendency to rise.

European metal fabricating, which had been stable for about 18 months, rose in the last part of 1953, just when U.S. production declined, but the rise was not strong enough to offset the U.S. decrease. Therefore, the combined index declined, though the fall was much milder than the downturn in the United States. The same is true of consumption of nonferrous metals; total consumption—U.S. and European—declined, though less than consumption in the United States. World production of nonferrous metals, on the other hand, kept rising, and in the fourth quarter of 1953 it was much greater than in the last quarter of 1952. In the first half of 1954, there was a minor reduction in copper output,[28] zinc output remained the same as in late 1953, and lead, tin, and aluminum production continued to rise.

These developments indicate that the stability of nonferrous metal prices was not the result of a simultaneous adjustment of production. Neither can it be explained by the slight expansion of European demand, although that may have made some contribution. The main factor responsible for the comparative firmness was the deliberate action to keep prices stable. The over-all effect of this action on the prices of nonferrous metals as a whole was strengthened by the increasing importance of aluminum consumption.[29] Aluminum prices were raised early in 1953 and again during the summer of that year, and then maintained at the new level.

Copper prices were expected to decline in the midsummer of 1953 when demand subsided, output was at its peak, and stocks in producing countries were continuing to rise. In fact, however, copper prices re-

[27] A 10 per cent decline in metal manufacturing from mid-1953 to the first quarter of 1954 was accompanied by a 20 per cent decline in copper and tin consumption; quarterly or monthly data for aluminum are not available, but shipments of fabricated products in the first quarter of 1954 were 24 per cent below their peak in the second quarter of 1953.

[28] When compared with the first half of 1953, copper output declined by 7 per cent.

[29] Aluminum consumption represented almost 30 per cent of total consumption of nonferrous metals in the United States in 1953, compared with about 17 per cent in 1948. The share of copper, in contrast, declined from 46 per cent in 1948 to 38 per cent in 1953, and that of tin fell from 11 per cent to 8 per cent.

mained stable, owing primarily to the policy of the Chilean Government, which maintained export prices through October 1953 at the high level of 36.5 cents per pound and accumulated large stocks instead of reducing prices. The purchase by the U.S. Government, after protracted negotiations, of a considerable portion of the Chilean stocks at a price of 30 cents per pound prevented the breakdown of Chile's support policy and assisted in stabilizing prices.[30] A sequence of strikes in the major producing countries, which resulted in temporary shortages and some strengthening of demand early in 1954, further added to the firmness of the copper market.

Prices of tin declined sharply during the first half of 1953, reflecting a persistent excess of production over consumption; the Korean truce and the near completion of the U.S. stockpiling program contributed toward depressing the tin market. The decline was then checked, mainly by the conclusion of an international tin agreement, negotiated in the late fall of 1953, and further additions to the U.S. stockpile, largely through the continued operation of the Texas smelter, which involves continued imports of tin ore.

U.S. stockpiling operations were also responsible for the comparative stability of lead and zinc prices.

Petroleum

Prices of crude oil, which are strictly administered and which had not been altered since December 1947, were raised in the early summer of 1953, from $2.570 per barrel to $2.820, the price at which they have been maintained. Consumption of crude oil[31] was scarcely reduced during the recession, since refining activity, in response to steadily increasing demand for petroleum products, remained high. During 1954, however, the rise in demand diminished and production exceeded consumption, with the result that prices for several refinery products had to be lowered and it appeared doubtful, for a while, whether prices for crude oil could be maintained under these conditions. Drastic reduction in the midsummer of 1954 of output of refinery products and of crude oil strengthened the market and any lowering of the price for crude oil was avoided.

[30] U.S. prices after decontrol in February 1953 had risen from 24 cents to just under 30 cents.

[31] As indicated by the following data on crude oil run to stills, in millions of barrels:

1952	I	575	1953	II	633
	II	537		III	653
	III	577		IV	638
	IV	600	1954	I	628
1953	I	630		II	631

Rubber

Prices of natural rubber are highly sensitive to demand fluctuations, and the decline in U.S. consumption and imports after mid-1953, only partly offset by a moderate rise in European purchases, caused a further downward movement in prices. This was perhaps the only major raw material price that fully reflected the impact of reduced U.S. consumption and imports in the recession. By the end of 1953, prices of natural rubber in New York had fallen to 20 cents per pound, i.e., to less than the synthetic rubber price of 23 cents. This gave rise, in the first quarter of 1954, to some substitution of natural for synthetic rubber, consumption of the former rising while consumption of the synthetic product declined. The subsequent strengthening of natural rubber prices was again in line with U.S. consumption and import changes; both gained in the second quarter of the year.

Textile raw materials

Prices of textile raw materials, which had declined in 1948–49 in response to the downturn in U.S. textile mill activity and had reacted sharply to the more widespread slump in the industry in 1952, remained stable during the 1953–54 recession.

In spite of reduced consumption and large surpluses in the United States, cotton prices in the U.S. and other markets were maintained, chiefly through the holding and financing of stocks under the U.S. agricultural support program. In addition, increasing demand in other parts of the world doubtless contributed to the strength of prices. The contrast to price behavior in 1948–49, when U.S. cotton prices declined by 12 per cent,[32] may be explained by the fact that at the onset of the 1948–49 recession prices were considerably above the support level, whereas in 1953 cotton prices had already dropped to that level before the recession began; consequently, the support program became effective immediately and prices did not decline further.

Although the U.S. share in total world consumption of wool is smaller than its share in the consumption of other major raw materials, the United States still accounts for roughly one fifth of world consumption and imports. A decline in U.S. industrial activity is customarily accompanied by a sharp reduction in wool imports; in both the 1948–49 and the 1953–54 recession, these imports were cut by over 40 per cent. Wool prices—in the U.S. and other markets—reacted sharply in 1949, but

[32] This figure refers to the ten-market average price for $1\frac{5}{16}$-inch middling, which was 37.5 cents per pound in the second quarter of 1948, when the support price was 28 cents, and had declined to 33 cents per pound by the second quarter of 1949.

remained stable in the recent recession. Although U.S. support operations may have been a contributing factor, they extend only to domestic output, which is small and therefore cannot have had much effect on world prices. Except for occasional attempts by the Latin American exporting countries, wool is not subject to stabilization measures, and market conditions must have been responsible for the weakness of prices in 1949 and for their strength in 1954. Statistical evidence to that effect cannot easily be established. Supplies from current production have been rising slowly. The volume of trade provides no clue, since the wool market is traditionally cleared. While consumption in Europe was high, it was not expanding in 1953, and it weakened slightly in the first two quarters of 1954; thus there was no offset for the substantial decline in U.S. consumption. The only evidence for the much stronger market position in 1953–54, compared with 1948–49, is supplied by figures on stocks in the two periods. In 1948–49, when stocks on the supply side (largely wartime carry-over in the hands of the Joint Organization, i.e., the United Kingdom-Dominion Wool Disposal Ltd.) amounted to over one fourth of current production and inventories in consuming countries were high, the market naturally was vulnerable and reacted to the decline in U.S. demand with a sharp fall in prices. The situation in recent years, however—when stocks in both the supplying and the consuming countries were at their lowest postwar levels—reflects a much more precarious balance between supply and demand, which could account for the relative stability of prices.

Forest products

The behavior of prices of major forest products, which usually are sensitive to changes in U.S. demand, is explained chiefly by the fact that activity in the main consuming industries—building and paper production—was hardly affected by the recession. Consumption in the United States remained high and, in addition, European demand kept rising. Prices for woodpulp followed, by and large, the general postwar pattern of raw material prices; they declined in the 1948–49 recession, were strongly affected by the increased activity and the subsequent downturn resulting from the Korean hostilities, and they became stable in mid-1953. The swings were most pronounced in the Scandinavian markets, while prices in the United States, where ceilings were in force from early 1951 to 1953, and in Canada moved within a narrower range.

The paper industry, which absorbs some 95 per cent of woodpulp production, has been expanding rapidly in the postwar years, in both the United States and Europe as well as in Canada. Output of woodpulp has likewise increased, mainly in the United States, where a rising

proportion of consumption is met from domestic sources. In 1948–49 the paper industry had shared in the general downturn in U.S. industrial activity; production fell by 13 per cent and imports by almost 30 per cent. Prices reacted with a decline of 16 per cent on the domestic market and of 23 per cent for imports. In 1953–54, however, paper production remained high; the index of the Board of Governors of the Federal Reserve System dropped by only 3 per cent from the peak in 1953 to the first quarter of 1954, and then rose again to a peak in the second quarter. Imports in the first half of 1954 were about 9 per cent less than in the first half of 1953, mainly on account of rapidly rising domestic output. The reduction in imports affected primarily the Scandinavian market; rising demand in Europe, however, more than offset the reduction in U.S. buying, and after mid-1953 Scandinavian prices of woodpulp rose steadily.

Demand for lumber depends primarily on building activity. In contrast to developments in 1948–49, when a brief but severe setback in that industry caused a reduction in demand and prices for lumber, building activity was not affected by the 1953–54 recession and demand remained strong. However, because of increasing supplies and strong competition between U.S. and Canadian sawmills, there was a moderate price decline for both domestic and imported lumber, which continued through the second quarter of 1954.

NOTE. The following statements describe briefly the data used in the tables and charts in this paper, and indicate the sources from which they were obtained.

U.S. Manufacturing Production. The data in all tables and charts, except the prewar section of Chart 1 and Part A of Chart 3, are based on the revised seasonally adjusted index of the Board of Governors of the Federal Reserve System, first published in *Federal Reserve Bulletin* (Washington), December 1953. The index used in the prewar section of Chart 1 and in Part A of Chart 3 is the index given in the paper by G. Lovasy and H. K. Zassenhaus, "Short-Run Fluctuations in U.S. Imports of Raw Materials, 1928–39 and 1947–52," *Staff Papers* (Washington), Vol. III, No. 2 (October 1953), pp. 270–89.

Manufacturing Production of OEEC Countries. The prewar data in Chart 1 are based on the monthly series covering European production in League of Nations, *World Production and Prices* (Geneva). The postwar data are based on the series in Organization for European Economic Cooperation, *Statistical Bulletins* (Paris); they have been adjusted by the author for seasonal variation.

Manufacturing Production, United States and OEEC Countries Combined. To combine the series described above for U.S. and OEEC manufacturing production, equal weights were used for the prewar period; for the postwar period, the U.S. index was weighted 5 and the OEEC index was weighted 3. These weights were based on the U.S. and European share in world manufacturing production given in United Nations, *Monthly Bulletin of Statistics* (New York), April 1954.

Volume of U.S. Imports. This series is based on data compiled and published by the U.S. Department of Commerce.

Volume of U.S. Raw Material Imports. This series is based on the index published in the paper by G. Lovasy and H. K. Zassenhaus, *op. cit.*

Volume of Raw Material Imports of OEEC Countries. These data have been computed on the basis of volume figures for the major European importing countries. The 1948–49 data are based on indices for the United Kingdom (crude materials and nonferrous metals), Western Germany (crude and semimanufactured materials), and France; the weights are based on the value of imports in the two years. In addition to the imports for these three countries, raw material imports of Belgium and the Netherlands are included in the 1952–53 data.

Volume of Raw Material Imports, United States and OEEC Countries Combined. This series is based on the U.S. and OEEC series described above, appropriately weighted.

U.S. Wholesale Prices and Market Prices of Raw Materials. These series are based on data of the U.S. Department of Labor.

U.S. Unit Value of Raw Material Imports. These indices were derived by using data on the value, in both current and constant prices, of U.S. imports of crude and semimanufactured materials as published by the U.S. Department of Commerce.

Prices of Raw Material Imports, OEEC Countries. This series, covering the prices of raw materials imported from overseas by the OEEC countries, is based on the index in Organization for European Economic Cooperation, *Statistical Bulletins* (Paris).

"World" Prices for Raw Materials. The prewar index, compiled by the German Statistisches Reichsamt, is based on 75 price series for industrial raw materials entering international trade. It is published in *Wirtschaft und Statistik*, 1935, Heft 6, and *Statistisches Jahrbuch für das Deutsche Reich* (Berlin). The original index expressed in terms of gold has been adjusted to a dollar basis by the author.

The postwar index, compiled by the United Nations and published in its *Monthly Bulletin of Statistics* (New York), is based on price quotations for nonfood raw materials; roughly half of the quotations are on an f.o.b. basis and half on a c.i.f. basis.

Indices of Metal Fabricating. The U.S. index is that of the Board of Governors of the Federal Reserve System, published in the *Federal Reserve Bulletin* (Washington). The index for the United States and OEEC countries combined is based on the U.S. index and the OEEC index of metal fabricating published by the OEEC in *Statistical Bulletins* (Paris).

Indices of Prices of Nonferrous Metals. The U.S. index is that compiled by the U.S. Department of Labor, Bureau of Labor Statistics. The OEEC series is the index of prices of nonferrous metals imported by OEEC countries, published by the OEEC in *Statistical Bulletins* (Paris).

Revenue Features of Multiple Exchange Rate Systems: Some Case Studies

Joyce Sherwood*

THE USUAL PURPOSE of multiple exchange rates is to cope with over-all balance of payments problems. Sometimes, e.g., when multiple rates are designed to deal with problems of particular exports or the relative holdings of various currencies, they may have a direct effect on these problems. But when they are designed to reduce or to counteract internal inflationary pressure, they may have an indirect effect. If multiple rates are to produce such an anti-inflationary effect, they must yield revenue or exchange profits. Frequently, indeed, the raising of revenue is a specific secondary purpose of a multiple rate practice; but in any case, irrespective of the purpose, the result often is an increase of revenue.

The revenue aspects of multiple currency practices are examined in this paper with a view to finding answers to such questions as the following: Are exchange profits or revenue derived from multiple rates a major or a minor source of total revenue? To what uses are exchange profits usually put? Do they become part of general budgetary revenue or are they earmarked for special uses? What alternative sources of revenue might best be substituted for exchange profits? How much fiscal reform might be needed to make it unnecessary to derive revenue from exchange systems? What considerations are involved in such fiscal reform?

General answers to some of these questions have tended to emerge in recent years as a result of the increasingly close contacts of the International Monetary Fund with members employing multiple currency practices. However, a detailed empirical investigation of the actual exchange and fiscal situations of individual countries should make possible more specific answers and provide a firmer foundation for some of the generalizations commonly made.

In selecting countries for such a study, several considerations have been kept in mind. First, the exchange system must give rise to revenue. Peru's dual free market, for example, would not be relevant for the purposes of this study, since it yields no revenue.

Second, it must be possible to calculate fairly readily the exchange profit involved in the multiple exchange system. For many countries

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with complicated multiple rate systems that probably yield a significant volume of revenue, it is impossible to determine with any certainty the magnitude of the revenue, since detailed information on the purchases and sales of exchange transacted at all the various rates is not available.

Third, the countries should be selected so as to illustrate the effect of different types of multiple currency system, e.g., exchange tax, surcharge, fixed exchange spread, and penalty export rate.

With these considerations in mind, the exchange systems of four countries—Cuba, Nicaragua, the Philippine Republic, and Venezuela—are examined in some detail in this paper. Their systems are comparatively simple, and the revenue earned is easily discernible. Cuba has a small exchange tax, and the Philippine Republic a large tax;[1] Nicaragua obtains revenue through the use of an exchange spread and, until July 1955, also obtained revenue through the use of surcharges; Venezuela realizes revenue from the sale of exchange purchased at a penalty export rate. Moreover, in each of these countries, the revenue earned is, or has been, an important practical consideration in determining whether multiple currency practices should be retained.

Cuba: Small Exchange Tax

Practically the only deviation in Cuba from an unrestricted international payments system and a unitary exchange rate is a 2 per cent tax imposed on most sales of exchange and on exports of securities. Although Cuba also has special payments arrangements with France, Spain, Mainland China, and North Korea, and a new exchange control law became effective in January 1953, the 2 per cent tax continues to be one of the most important features of its exchange control system.

When the exchange tax was established in 1925, it was levied at the rate of 0.25 per cent on all money or its equivalent exported from Cuba. In September 1941, the rate was raised to 0.3 per cent and in December 1941 to 1 per cent. In 1943 the tax was further increased to 2 per cent, where it has since remained. The last two changes were effected simultaneously with other tax increases to meet anticipated increases in expenditures, particularly those attributable to World War II.

The tax applies essentially to all payments abroad except payments by tourists and diplomats, the repatriation of specified foreign capital, and government transactions. It is collected by the commercial banks at the time exchange is sold. It is also levied on the value of those exports the proceeds from which are not returned to Cuba, i.e., it is a tax on the

[1] In August 1955, the Philippine Congress passed legislation to eliminate at the end of 1955 the 17 per cent exchange tax and to substitute a special import tax.

nonrepatriation of export earnings. If a bank bond guaranteeing the return of the proceeds to Cuba is posted, the tax does not have to be paid at the time of export; but if no such bond is posted, the tax is collected by the customs houses.

The tax was originally imposed by the Public Works Law of 1925 and, together with other taxes, was designed to provide revenue principally for a special public works fund. Receipts from the tax are now utilized for general government expenditure, except that one eighth of the proceeds, i.e., an amount corresponding to the original tax of 0.25 per cent, is earmarked specifically for payments on the Public Works Loan of 1937–47.

Until recently, it had never been argued that the exchange tax served any other purpose than to increase government revenue, although it may also have had some incidental effect in reducing imports and capital exports. However, since 1952, when there was a substantial deficit in the balance of payments, the balance of payments effects of the tax have tended to receive more attention.

At first sight, an exchange tax of 2 per cent seems unlikely to be an important revenue producer in Cuba's total revenue system. In a country with a tax system that includes several indirect import and consumption taxes, the importance of any individual tax may, however, not be indicated accurately by the absolute amount of revenue raised by it. The wide diversity of revenue sources in Cuba and the magnitude of revenue from these sources are indicated by the data in Table 1; but since some of the government receipts are set aside (outside the budget) for autonomous agencies, retirement funds, etc., the figures do not include all government receipts. Receipts from the exchange tax (tax on export of money) for the fiscal year 1953–54 were about 11 million pesos. In the last four fiscal years, they have been fairly constant, varying between 11 million and 17 million pesos. Total budget receipts in 1953–54 were 271 million pesos. Thus, in that year the receipts from the 2 per cent tax constituted only about 4 per cent of total budget receipts. Even in comparison with other important revenue sources, the exchange tax does not rank very high. In 1953–54, receipts from the 2 per cent tax were equivalent to less than 20 per cent of the receipts from customs duties and charges.

However, the exchange tax was a more important source of revenue than the income tax until 1953–54, when the revenue from both sources was almost the same; and there are numerous small taxes, such as the excises on tobacco, sugar, and liquor, real estate taxes, excess profits taxes, the inheritance tax, motor vehicle license fees, etc., which have not yielded nearly as much as the 2 per cent exchange tax.

Several studies of the Cuban fiscal system have already recommended the abolition of the exchange tax, or at least of some of its applications.

TABLE 1. BUDGET REVENUES OF THE GOVERNMENT OF CUBA, FISCAL YEARS 1951–54[1]

(In millions of pesos)

Sources of Revenue	Fiscal Years Ended June 30			
	1951	1952	1953	1954
Charges and duties on imports	87.8	85.1	80.8	71.8
Customs duties and charges	*71.6*	*68.9*	*66.3*	*58.6*
Consular fees	*13.4*	*13.1*	*11.6*	*10.7*
Port improvement charges	*2.8*	*3.1*	*2.9*	*2.5*
Taxes on business transactions and transfer of property	81.6	96.8	89.6	76.9
Sales and gross receipts tax	*46.4*	*55.8*	*46.0*	*41.6*
Stamp tax	*13.2*	*12.3*	*11.0*	*10.2*
TAX ON EXPORT OF MONEY	*13.7*	*14.7*	*17.1*	*10.9*
Inheritance tax	*7.1*	*7.4*	*8.2*	*7.3*
Sundry taxes	*1.2*	*6.6*	*7.3*	*6.9*
Excise taxes	33.2	36.1	37.4	35.0
Gasoline	*13.2*	*15.7*	*16.7*	*16.6*
Tobacco	*6.3*	*5.8*	*5.7*	*5.3*
Sugar	*5.0*	*5.5*	*5.2*	*4.4*
Liquors and beverages	*5.1*	*5.7*	*6.7*	*4.8*
Other products	*3.6*	*3.4*	*3.5*	*3.9*
Taxes based on declared capital and profits	68.2	89.9	81.7	58.7
Declared capital	*6.6*	*6.0*	*10.3*	*7.8*
Corporations	*14.7*	*17.8*	*16.4*	*15.4*
Sugar mills	*15.1*	*20.3*	*12.4*	*4.6*
Commerce and industry	*4.0*	*5.6*	*5.6*	*2.4*
Real estate	*5.5*	*6.2*	*8.9*	*6.6*
Interest and dividends	*3.5*	*11.2*	*6.2*	*3.7*
Banks, railroads, mines, etc.	*2.5*	*3.9*	*4.3*	*1.9*
Excess profits	*2.2*	*1.3*	*1.0*	*0.4*
Special taxes on industry	*9.7*	*12.8*	*10.6*	*9.9*
Sundry taxes	*4.4*	*4.8*	*6.0*	*6.0*
Taxes based on personal income	10.2	11.9	14.6	11.6
Other taxes, fees, and fines	16.7	17.2	15.7	17.0
Communications revenue	*4.9*	*5.1*	*5.7*	*5.6*
Motor vehicle license fees	*3.8*	*4.6*	*5.1*	*5.0*
Sundry taxes and fees and revenue from special funds	*8.0*	*7.5*	*4.9*	*6.4*
Total gross revenue	297.8	337.0	319.9	271.0
Adjustment (other post balance income and other resources, less diminutions)	−12.1	−10.2	−11.3	−0.1
Total adjusted revenue	285.7	326.8	308.6	270.9

Sources: Tribunal de Cuentas, Havana, and *Revista del Banco Nacional de Cuba* (Havana), August 1955.

[1] Totals may not equal the sums of the items because of rounding.

Its abolition was among the recommendations made by Seligman and Shoup in 1932, and again by Magill and Shoup in 1939.[2] In view of

[2] Edwin R. A. Seligman and Carl S. Shoup, *A Report on the Revenue System of Cuba* (Havana, 1932), p. 304; Roswell Magill and Carl Shoup, *The Cuban Fiscal System, 1939*, p. 102.

Cuba's budget situation and its need for revenue, the exchange tax could probably not be eliminated unless some alternative source could be found to replace the revenue presently earned through the exchange system. An examination of Cuba's present fiscal system suggests that the most suitable method of increasing revenue probably requires a fairly comprehensive fiscal or administrative reform. The principles of budgetary expenditure policy scarcely fall within the scope of the present paper, and, in any event, the Cuban Government has recently been concerned with the problems of a budget deficit. There were substantial deficits in the fiscal years 1952–53 and 1953–54, but it is reported that the deficit in 1954–55 was small.[3] Fluctuations in the world sugar situation may also create a need, from time to time, for larger revenues in Cuba. In recent years, when sugar has been in surplus, the Government has undertaken to hold stocks and to help maintain the income of sugar producers. Increased revenue has also been required for additional public works, which have been undertaken to maintain employment when restrictions have been placed on sugar production. In considering the problem of eliminating the exchange tax, attention should therefore be directed first to the possibility of raising additional revenue from other sources.

In the absence of a comprehensive fiscal or administrative reform, an increase in revenue from the present tax structure of Cuba could probably be attained only by raising import or consumption taxes or by imposing additional small taxes. Studies of the Cuban fiscal system suggest, however, that these might not be satisfactory alternatives. According to a report on Cuba by a mission from the International Bank for Reconstruction and Development, about two thirds of the total tax yield until the beginning of the 1940's was from consumption and import taxes, while direct taxes provided only about 5 or 6 per cent.[4] In recent years, there has been an attempt to reduce reliance on consumption taxes. Direct taxation was substantially increased in the 1940's, and revenue from this source has since increased slightly but steadily. Nevertheless, indirect taxes still account for almost 70 per cent of total revenue, and consumption taxes, a hang-over from colonial times, continue to bulk large in the Cuban fiscal system.

The IBRD mission indeed suggested that, since 80 to 90 per cent of the yield of the 2 per cent tax is derived from transfers of money to pay for merchandise, it might be replaced by a moderate import surcharge yielding a similar amount.[5] The objections of the Cuban authorities to this suggestion seem to be largely of a political nature. As the exchange tax has been in effect since 1925, people have become accustomed to it

[3] *Foreign Commerce Weekly* (Washington), June 27, 1955, p. 4.
[4] International Bank for Reconstruction and Development, *Report on Cuba* (Washington, 1951), p. 667.
[5] *Ibid.*, p. 558.

and the authorities hesitate to make a change. The desirability of using the tariff as a substitute for an exchange tax is not discussed in this paper, but, as far as the exchange system is concerned, the effects of tariff surcharges are little, if at all, different from those of an exchange tax. The Cuban tariff, based on a decree of 1927 and subsequent modifications, underwent substantial alteration in 1952. The basis for further revision was laid in February 1955, when the Executive was authorized to revise customs nomenclature, to change merchandise classifications, and to simplify the determination and application of the classifications.

The present Cuban tax system already contains an excessive number of small taxes. Both a report of Price, Waterhouse & Co. in 1950 and that of the IBRD mission in 1951 considered the large number of taxes to be one of the main weaknesses of the tax system. Legal requirements and the tendency to create a new tax whenever the need arises for new expenditure have been the main causes of the large number of taxes. According to the IBRD mission report, officials in Cuba are aware of the difficulty of enforcing such an intricate system, and the elimination of a number of taxes, especially those with low yields, is part of current plans for fiscal reform.

Additional revenue might be raised by the more efficient enforcement of direct taxes, and particularly of the income tax. In the fiscal year 1953–54, income tax receipts from direct contributions, which tend to come from the middle and upper income groups, were less than receipts through the medium of a withholding tax, which are paid mainly by people in the lower income brackets. (Of the total income tax receipts, 5.76 million pesos was from direct contributions and 5.85 million was paid on a withholding basis.) While estimated national income increased from 1,651 million pesos in 1948 to 1,715 million pesos in 1954, revenue from the income tax paid by direct contribution declined from 6.5 million pesos in fiscal 1948 to 5.8 million pesos in fiscal 1954.[6] The larger number of taxpayers in the lower income groups might be thought to account for this seeming anomaly, but widespread evasion is also suggested by figures indicating that only about 20,000 people pay income taxes directly (in addition to those from whose wages and salaries the tax is withheld), while 80,000 file profits tax returns.[7] It seems probable that most of those who file profits tax returns earn at least the minimum annual income for which an income tax return should also be filed.

With a view to increasing direct income tax receipts, a law passed in 1952 required, inter alia, that any person wishing to transfer property or to leave Cuba had first to produce proof of payment of income tax. Later, the law was modified to the extent of requiring from a person

[6] *International Financial Statistics* (Washington), October 1955, and Tribunal de Cuentas, Havana.

[7] International Bank for Reconstruction and Development, *op. cit.*, p. 671.

leaving Cuba only a declaration that he had fulfilled his income tax obligations. In June 1954 a new law was enacted modifying the basic income tax law in an attempt to reduce evasion. The major provisions of this law were extension of the withholding system to income from agriculture, livestock raising, mercantile industry, and financial activities; establishment of a taxpayers' identity card system making it obligatory, when performing certain legal and financial acts, or when departing from Cuba, to furnish evidence of having filed an income tax return; and provision for increased penalties for income tax fraud including, for the first time in Cuba, imprisonment for second repeaters.

These and other legislative acts indicate that the Cuban authorities are putting into effect some of the recommendations made in earlier reports on the Cuban fiscal system. There have been some increases in direct taxes, and regulations have been more rigorously enforced. Transportation, business, personal income, luxury, and property taxes have been raised in recent years, and in 1951 various taxes paid by small businesses were consolidated in an effort to make enforcement easier. Regulations were issued in 1954 for the implementation of a law passed in 1951 for the purpose of improving accounting methods and facilitating the work of the Tribunal of Accounts in supervising national fiscal operations. Many of the tax increases, however, have been of the type which has become common in Cuba, the proceeds being earmarked for some specific purpose.

Although budgetary revenue in 1952–53 was nearly double that in 1945, there was nevertheless an over-all deficit. In 1951–52 and 1952–53 the yield from taxes on capital and profits and from income taxes exceeded the yield in 1950–51 by more than the yield of the exchange tax. But as the increased tax yields were all intended to meet increased expenditures, the prospects for removing the exchange tax were in no way changed. In 1953–54 the position was even less promising, for government revenue declined sharply, primarily because of the general effects of the cut in sugar production, and there was again a budget deficit.

These facts suggest that, if the exchange tax is to be eliminated, either much larger revenues are required or some check will have to be placed on expenditures. Although attention should perhaps be paid to the possibilities of obtaining larger revenues, particularly in the long run, the extent to which expenditures might be reduced would have to receive more serious consideration.

Balance of payments considerations

Since Cuba has had frequent balance of payments surpluses in recent years, it might have seemed a convenient time to remove the 2 per cent exchange tax. In 1949, 1950, and 1951 there were active balances. Al-

though the trade balance continued to be active in 1952, it was too small to offset the customary deficit on invisible items and there was a substantial balance of payments deficit; but the position was again favorable in 1953.

In view of its dependence on the world sugar situation, the Cuban balance of payments is rather vulnerable, and therefore the balance of payments effects of the exchange tax deserve attention. In principle the tax should serve, to some extent, as a check on capital outflow and thus as a factor in strengthening the balance of payments; and it might also reduce imports a little. The extent to which these effects are in fact realized may be questioned, however. Certain marginal importers may import less but, in view of the smallness of the tax, the effective reduction is probably not large, and some evasion of the tax on export proceeds not repatriated has been reported.

The administration of the collection of the tax has been modified in an effort to reduce evasion. Under Law-Decree No. 591 of December 17, 1952, the exchange of national currency for foreign currency is presumed equivalent to exportation and is therefore subject to the tax. The tax was further regulated by Decree No. 928 of April 10, 1953; among other things, this Decree abrogated the exemption of 50 pesos for travelers and included receipts of foreign currency in Cuba and any transfers of funds held abroad by Cuban nationals, whether to foreigners or to other Cubans, among transactions subject to the tax. Although the last provision may be difficult to enforce, these recent acts indicate tightened enforcement of the law, and they could be expected to tend to reduce capital exports and therefore to have a favorable effect on the balance of payments.

It is possible that the tax has some detrimental effects on foreign investment in Cuba. Until recently, the tax was paid on foreign capital being repatriated just as it was paid on any other outgoing capital, and this tended to discourage the entry of capital. Action was taken in November 1952 to alleviate this disadvantage, by exempting from the tax the repatriation of investments in industrial, agricultural, or other enterprises or their securities which have been registered with the National Bank of Cuba.[8] The exemption was also extended to capital equipment when re-exported. This removes the disability imposed on foreign investors who invested capital in Cuba at the rate of 1.00 peso per U.S. dollar, but who could withdraw it only at the rate of 1.02 pesos per U.S. dollar. However, the tax still applies to profits repatriated and may, therefore, still be a deterrent to investment. This might be insignificant for investments that can be assured of a substantial return, but investors might hesitate where more risk is involved.

[8] Law-Decree No. 548, November 20, 1952 (published in *Gaceta Oficial*, Havana, November 22, 1952).

Nicaragua: Surcharges and Exchange Spread

The exchange system maintained in Nicaragua from November 9, 1950 until July 1, 1955 provided for two official exchange rates (C$5 and C$7 per U.S. dollar) and two surcharges (one on semiessential and one on nonessential imports). When this system was introduced, revenue purposes were of minor importance, although the provision of exchange for government purchases at the preferential rate of C$5 was intended to diminish the revenue requirements of the Government, and it was also expected that the surcharges would absorb some of the current monetary income. There was a spread of C$0.40 between the selling rate of C$7.00 per U. S. dollar and the effective buying rate of C$6.60. This spread, however, did not at first produce any net revenue. The effective buying rate was the result of a mixing arrangement whereby 20 per cent of the export proceeds was purchased by the National Bank at C$5 per dollar and 80 per cent at C$7. However, half of the proceeds of the portion purchased at the C$5 rate was allocated to government payments, and the other half was earmarked for sale at the same rate for the liquidation of commercial arrears. As long as each of these two demands for exchange was large enough to absorb 10 per cent of total exchange receipts, no exchange profits were to be expected; but if any profits should in fact arise, they were to be allotted to a special Exchange Equalization Fund. The proceeds from the surcharges were intended to serve anti-inflationary purposes, 20 per cent being used for retirement of government debt held by the National Bank and the remainder being sterilized; revenue from this source was not to be included in the budget.

In the course of time, however, the revenue aspects of these exchange practices became more important, and the Nicaraguan authorities stated that the removal of the surcharges would require a fiscal and tariff reform. As development projects were undertaken, there was an intensified need for additional revenue, and the accumulated proceeds from surcharges began to be used for this purpose. Before 1952–53 the proceeds were retained for the special purposes originally allotted to them; but in the 1952–53 budget, for the first time, estimates of surcharge proceeds were formally included,[9] and some of the funds were earmarked for such development projects as the construction of highways and of grain storage elevators. It was planned to spend the amount earmarked for highway development gradually over a three-year period. Since 1952 some of the accumulated surcharge proceeds were also used to capitalize the new National Institute for Economic Development. As commercial arrears were liquidated during 1952, the preferential rate of C$5 began to be used principally for government payments. There was

[9] Ministerio de Hacienda y Crédito Público, *Presupuesto General de Egresos e Ingresos, 1952–53* (Managua, 1952).

no revenue from the exchange spread until 1952, but in that year it, too, became a source of revenue, when the foreign exchange no longer needed for repayment of arrears could be sold at a profit at the C$7 rate. Important revenue-producing elements thus appeared in Nicaragua's exchange system—the exchange profit derived from the spread and the surcharges on semiessential and nonessential imports.

Nature and magnitude of the revenue from the exchange system[10]

Up to July 1955, imports were divided into three categories, to all of which the C$7 exchange rate applied, plus surcharges of C$1 for List II imports (semiessentials) and C$3 for List III (nonessentials). The value of the imports covered by List II and List III (US$9.7 million in 1952, US$10.5 million in 1953, and US$12.1 million in 1954)[11] constituted in recent years about 25 per cent of Nicaragua's total imports. In addition, invisibles, with certain specified exceptions, were subject to a surcharge of C$3 per U.S. dollar on any official exchange purchased for these transactions. But since the effective free market rate was less than the official rate plus the surcharge, persons requiring exchange for invisibles usually obtained it in the free market, and for that reason there was no revenue from surcharges on invisibles.

Although, for reasons outlined above, the spread of C$0.40 between the effective buying rate of C$6.60 per U.S. dollar and the selling rate of C$7.00 produced no exchange profit, the spread had a revenue significance as long as allocations of exchange at the C$5 rate were maintained; viz., the preferential rate for government purchases reduced the Government's requirements of local currency. After the repayment of commercial arrears was completed, the spread also produced an actual exchange profit.

A 5 per cent tax collected by the National Bank on sales of official exchange for invisibles could be regarded as another part of the Nicaraguan exchange system. Like the surcharge on invisibles, however, this tax probably yielded no revenue, since exchange for most invisibles was in practice purchased in the free market.

The surcharges on imports from November 1950 to the end of 1951 are reported to have amounted to C$16.7 million. For 1952–54, they may be estimated as follows: 1952, C$16.1 million, 1953, C$19.1 million, and

[10] Statistical data used for the computations in this section are from *Revista Trimestral del Banco Nacional de Nicaragua* (Managua), 1952, 1953, and 1954 issues, and information from the National Bank.

[11] If it is assumed that surcharges were not paid on government imports, actual sales of exchange in 1952 for private imports of commodities in List I (essential commodities) amounted to the equivalent of US$21.7 million; for those in List II, to US$6.5 million; and for those in List III, to US$3.2 million. In 1953, the amounts were US$26.6 million, US$6.2 million, and US$4.3 million, respectively; and in 1954, they were US$35.6 million, US$7.3 million, and US$4.8 million.

1954, C$21.7 million.[12] These estimates for 1952 and 1953, together with the figure reported for the period from November 1950 to the end of 1951, correspond sufficiently closely to the figure of C$54.5 million reported by the President of Nicaragua as the total yield from surcharges to the end of 1953[13] to justify a fair measure of confidence in the estimate for 1954. The addition of this estimate to the President's figure brings the total to C$76.2 million.

The revenue potentially available from the exchange spread may be estimated as follows. In 1952 the total exchange receipts of the National Bank were US$43 million. Twenty per cent (or US$8.6 million) was purchased at the rate of C$5 per U.S. dollar, and it was possible, in principle, to make a "profit" of C$17.2 million by selling this exchange at the rate of C$7 per dollar. Sales of exchange for government purchases at the C$5 rate, however, amounted to US$4 million and for liquidation of commercial arrears to US$300,000. Since there was no "profit" on these sales, the total "profit" from the spread was thus reduced to C$8.6 million.

In 1953 total exchange receipts were US$47.4 million, and sales of exchange for government purchases at the C$5 rate are reported at US$4.6 million; in 1954 the corresponding figures were US$55.5 million and US$5.6 million.[14] Calculations similar to those used for 1952 therefore give a "profit" from the spread of about C$9.8 million in 1953 and C$11 million in 1954.

Actual profits were somewhat less than these estimates, since foreign exchange reserves were accumulated in 1952 and 1953 and to that extent the realization of exchange profit was postponed. The increase in reserves in 1952 was US$6.2 million, and in 1953 it was US$1.2 million. In 1954 foreign exchange reserves were reduced by US$3.0 million. These

[12] These estimates have been made on the basis of actual sales of foreign exchange (footnote 11) rather than on data for current imports, and include some sales of exchange to pay for past imports. Details of the estimates are as follows:

Year	*Commodity List*	*Actual Sales* (in millions)	*Surcharge per U. S. Dollar*	*Estimated Yield* (in millions)
1952	II	US$6.5	C$1	C$6.5
	III	US$3.2	C$3	C$9.6
1953	II	US$6.2	C$1	C$6.2
	III	US$4.3	C$3	C$12.9
1954	II	US$7.3	C$1	C$7.3
	III	US$4.8	C$3	C$14.4

[13] Message of the President of Nicaragua to the National Congress (Managua), May 1954.

[14] The exact amount of sales of exchange to the Government in 1954 at the C$5 rate is not known; however, total sales of exchange to the Government were more than this amount (for visibles only, US$7.1 million) and the 1950 exchange law specified that only 10 per cent of total exchange receipts was to be sold to the Government at the C$5 rate. For this reason, 10 per cent of total exchange receipts has been used as the amount sold at the C$5 rate.

movements meant that the exchange profit would be less than the estimate by C$2.5 million in 1952, and by C$0.5 million in 1953, but that in 1954 it would exceed the estimate by C$1.2 million. The total estimated revenue derived from Nicaragua's exchange system is summarized in Table 2.

TABLE 2. ESTIMATES OF TOTAL REVENUE DERIVED FROM NICARAGUA'S EXCHANGE SYSTEM, CALENDAR YEARS 1952–54

(*In millions of córdobas*)

	1952	1953	1954
Surcharges on imports	16.1	19.1	21.7
Exchange "profit"	6.1	9.3	12.2
Total	22.2	28.4	33.9

If the Government had had to pay C$7 per U.S. dollar for the exchange that it purchased at the preferential rate in 1952, 1953, and 1954, its expenditure on foreign exchange would have been increased by about C$28.4 million (C$8 million in 1952, C$9.2 million in 1953, and C$11.2 million in 1954). In all, the potential revenue benefits of the exchange system as a whole therefore amounted to about C$30–40 million a year.

COMPARISON WITH OTHER SOURCES OF REVENUE

The estimated revenue from the exchange system for the calendar year 1953 was 14 per cent of the total revenue estimated for the fiscal year 1953–54; and the estimate for 1954 was a slightly higher percentage of estimated budget receipts for 1954–55. A reform of the exchange system which would remove such a large producer of revenue therefore required other significant changes in the tax system.

A mission from the International Bank for Reconstruction and Development, after a visit to Nicaragua in 1952, had recommended the introduction of an income tax, an increase in rates for the property tax and an improvement in its collection, and a review of all other sources of internal revenue and of the customs tariff.[15] The object of these recommendations was to reduce indirect taxes, to abolish taxes with disproportionately high collection costs, and to simplify the tax system by consolidating different taxes and duties imposed on the same object. The Nicaraguan tax structure is very dependent on indirect taxes, which in recent years have yielded between 80 and 90 per cent of total revenue (Table 3).

[15] International Bank for Reconstruction and Development, *The Economic Development of Nicaragua* (Washington, 1953), p. 326.

TABLE 3. REVENUE RECEIPTS OF GOVERNMENT OF NICARAGUA, FISCAL YEARS 1951–55[1]

(In millions of córdobas)

Sources of Revenue	Fiscal Years Ended June 30				
	1951	1952	1953	1954[2]	1955[3]
Direct taxes					
On income	—	—	—	6.5	16.0
On property	2.3	2.6	3.2	4.4	5.0
Total	2.3	2.6	3.2	10.9	21.0
Indirect taxes					
On imports	43.8	57.9	84.0	99.3	93.1
Customs duties	*22.0*	*25.5*	*32.8*	*48.6*	*43.0*
EXCHANGE SURCHARGES	*1.9*	*8.2*	*23.0*	*17.0*	*18.1*
Consular fees	*5.7*	*7.1*	*7.6*	*9.3*	*9.0*
5 per cent ad valorem	*11.2*	*13.5*	*16.2*	*19.2*	*18.0*
Gasoline	*1.6*	*2.1*	*2.5*	*2.8*	*2.7*
Import volume	*1.3*	*1.4*	*1.8*	*2.2*	*2.1*
Other	*0.1*	*0.1*	*0.1*	*0.2*	*0.2*
On exports	8.2	8.7	10.6	8.9	9.1
Export duties	*2.7*	*2.8*	*3.0*	*2.2*	*3.0*
Coffee	*4.7*	*5.1*	*6.6*	*5.7*	*5.1*
Gold	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*
Lumber	*0.3*	*0.3*	*0.5*	*0.5*	*0.5*
On consumption	19.4	24.1	27.5	34.0	32.9
Liquor and beer	*10.8*	*12.8*	*13.3*	*16.9*	*16.2*
Tobacco	*6.3*	*8.0*	*10.0*	*11.9*	*11.5*
Bottled soft drinks	*0.9*	*1.3*	*1.5*	*2.0*	*2.0*
Sugar	*1.2*	*1.4*	*1.8*	*2.3*	*2.3*
Gasoline	*0.2*	*0.6*	*0.9*	*0.9*	*0.9*
Licenses and permits	0.5	0.6	0.8	0.8	0.8
Stamp taxes	3.3	3.9	4.7	5.5	5.0
Other	0.8	1.2	1.8	1.8	1.6
Total	76.2	96.2	129.5	150.5	142.4
Income from commercial and industrial activities of the State	6.6	7.6	8.5	9.2	8.5
Receipts from government land, refunds, and temporary or special receipts	1.5	6.3	3.1	5.9	8.3
Miscellaneous revenue	0.4	1.3	1.9	2.9	1.8
Total revenue	87.0	113.9	146.2	179.4	182.0

Source: Ministerio de Hacienda y Crédito Público, *Presupuesto General de Egresos e Ingresos, 1954–55* (Managua, 1954).

[1] Totals may not equal the sums of the items because of rounding.

[2] Preliminary.

[3] Estimates.

Some of the IBRD recommendations—notably the introduction of an income tax and a revised tariff—have since been carried out, but other changes have not yet been made. An income tax law was introduced in December 1952. In the first year of operation, it produced C$6.5 million, which was somewhat less than the C$10 million that had been estimated. In 1954–55, it was expected to yield C$16 million; but even this figure was below the estimate for receipts from taxes on liquor and beer, the largest producers of revenue among Nicaragua's consumption taxes (Table 3). The property tax is frequently evaded and remains a minor source of revenue; consumption taxes on sugar and soft drinks together provide nearly as much revenue as the property tax.

When consideration was given to the abolition of the exchange surcharges (which eventually became effective on July 1, 1955, as described below), account had to be taken of the relative magnitude of the revenue derived from the exchange system and that raised from other sources. In the two fiscal years 1952–53 and 1953–54, surcharge proceeds plus profits from the exchange spread were equal to about half the receipts from customs duties, the largest single tax source. The estimates for 1954–55 showed that exchange surcharges in that year were still expected to exceed revenue from the income tax.

Total government revenue has increased rapidly in the last few years. Since expenditures have not increased as much as revenue, there have been small surpluses. In 1954–55, however, the budget estimated total receipts at C$182 million and total ex[illegible]tures at C$209 million. The deficit of C$27 million was to be met fr[illegible]e surpluses realized in earlier years. In March 1955 estimates of bot[illegible]eipts and expenditures were increased by C$15 million, the increase in revenue being expected to come from customs duties and consular fees and from the exchange surcharges that were abolished later in the year.[16] Of the increase of about C$92 million in total revenue from 1950–51 to 1953–54, taxes on imports were responsible for C$55 million.

Reforms of July 1955

On July 1, 1955 a new par value and single basic import rate of C$7 was established. A revised tariff went into effect, and the surcharges were removed. Imports are still classified in three categories, which, however, are now used merely for the purpose of applying advance deposit requirements. In addition to absorbing the exchange surcharges, the revised tariff also permitted the abolition of the two 5 per cent taxes

[16] Bank of London & South America, *Fortnightly Review* (London), April 16, 1955, p. 228.

on imports and of several other miscellaneous taxes. Revenue from the revised tariff is expected at least to equal, if not to exceed, the revenue previously derived from the old tariff, the surcharges, and the other taxes that have been abolished.

As from July 1, 1955, also, government payments are to be made at the same rate as other payments. An exchange spread still remains, however, for the buying rate of C$6.60 per U.S. dollar was temporarily maintained, with the proviso that the proceeds from the spread of 40 centavos thus left between the buying and the selling rates are to be used to promote domestic production. This spread is the only revenue feature remaining in the Nicaraguan exchange system. Its ultimate removal may depend on factors other than purely fiscal considerations. It may be thought that a buying rate higher than C$6.60 might contribute to inflationary pressure now, but that at some future date exporters might be granted a higher rate, particularly if the principal exports of Nicaragua should encounter serious marketing difficulties. In any event, no further changes in the revenue features of the exchange system are likely until the effects of the new tariff have been observed and its revenue yield determined. Now that the tariff has been reformed and the surcharges have been absorbed, it seems unlikely that the other indirect taxes which are now levied could be relied on for any further significant increase in revenue.

Philippine Republic: Large Exchange Tax

A 17 per cent tax on sales of foreign exchange was put into effect in the Philippine Republic in 1951, following the Bell mission report to the President of the United States. The Bell mission had recommended

> That the finances of the Government be placed on a sound basis in order to avoid further inflation; that additional tax revenues be raised immediately in as equitable a manner as possible to meet the expenditures of the Government; that the tax structure be revised to increase the proportion of taxes collected from high incomes and large property holdings; that the tax collecting machinery be overhauled to secure greater efficiency in tax collection. . . . [17]

The country's finances were in a critical condition, and additional revenue was urgently needed. Several alternative methods were suggested by the mission to secure revenue by methods that would also reduce import demand.

Certain fiscal reforms were accordingly put into effect in 1951 by the

[17] Economic Survey Mission to the Philippines, *Report to the President of the United States* (Washington, October 9, 1950), pp. 3–4.

Philippine Government. Measures were passed that provided not only for the 17 per cent exchange tax but also for increased taxes on liquor and cigarettes, increased rates of corporate and individual income tax, and a sales tax on imported luxuries. In addition, administration and government account reforms were made.

When the 17 per cent exchange tax was introduced on March 28, 1951, trade and exchange controls had been in effect for over a year. Difficulties had been encountered in the administration of these controls, and they were criticized as a burden to business and as offering opportunities for favoritism. The Philippine authorities believed that an exchange tax would be easier to administer and collect than, for example, an excise tax, which was one of the alternatives suggested.

With the approval of the International Monetary Fund, the exchange tax was adopted as a temporary measure for a two-year period ending in March 1953. It was subsequently extended at various times, the last extension being in June 1955. In contrast to measures in some other countries where the exchange system produces revenue, the Philippine exchange tax was not introduced for another specific purpose, only to become important subsequently as a source of funds. From the beginning, it had the twofold purpose of securing tax revenue and reducing imports. It was expected in 1951 that whatever emergency measures were enacted would be replaced later by some other more desirable form of taxation. In August 1955, at a special session of the Philippine Congress, legislation was passed to eliminate the exchange tax at the end of 1955 and to substitute a special import tax.

The Philippine exchange tax of 17 per cent was levied on the peso value of sales of foreign exchange by authorized agents. Government payments and payments for certain specified imports and invisibles were exempted, and were made at the official selling rate of 2.015 pesos per U.S. dollar. The official buying rate (2.00375 pesos per U.S. dollar) applied to all incoming exchange. Provision was made in the legislation passed in 1951 for the exemption of certain transactions and for refunds on certain other transactions. The exempted transactions were primarily payments for "invisibles" and for machinery and raw materials to be used by new and essential industries. Refundable items included payments for certain imports listed as necessary, e.g., rice, flour, fertilizer, textbooks, pharmaceuticals, etc. In July 1952 the time-consuming refund procedure was abolished, and the list of exemptions was extended to include those items previously subject to refund.

The revenue from the 17 per cent tax in the fiscal years 1952, 1953, and 1954 was 155 million pesos, 115 million pesos, and 126 million pesos,

respectively.[18] An estimate of revenue in the fiscal year 1955, based on foreign exchange disbursements, is 137 million pesos.[19]

The data in Table 4 indicate the importance of the revenue from the exchange tax in comparison with revenue from other sources. In the fiscal year 1952, 24 per cent of the total revenue from taxation of 654.8 million pesos (before apportionment to local governments) was obtained from the exchange tax; in 1953 and 1954 the percentage was somewhat smaller (19 per cent).

The exchange tax was the largest single source of tax revenue in the Philippines in 1952 and 1954; in 1953, revenue from the income tax was slightly more than that from the exchange tax. While a larger figure is shown in Table 4 for the category "license and business taxes," this includes several taxes, such as a tax on liquor dealers, percentage sales taxes, an amusement tax, tax on brokers, etc. Receipts from import duties were equal to only about one fourth of the revenue from the exchange tax and only about 6 per cent of total tax receipts in 1954.

The proceeds from the exchange tax accrued to the general government funds. They were utilized for ordinary government expenditures and were not handled in a special manner or for special purposes.

The Philippine exchange tax is a good illustration of the complexity of the considerations involved in finding a substitute, outside the exchange system, for a sizable exchange tax. First, not only were straight revenue considerations involved, i.e., other tax sources which might be utilized; the state of the budget also had to be taken into account. As long as there is a budget deficit, new revenue sources are needed to increase current revenue, not merely to substitute for some existing source of revenue. Second, important balance of payments functions also were served by the exchange tax. Third, the tax probably siphoned off excessive profits by importers in a way that might not have been effectively assured by some other tax even if the revenue had been maintained. Finally, some of the alternative revenue sources might have raised questions involving trade relations with other countries.

[18] Central Bank of the Philippines, *Annual Reports, 1953* and *1954* (Manila, 1954–55).

[19] This estimate was derived as follows from data in the *Central Bank News Digest* (Manila):

Disbursements for fiscal 1955	US$636.0
Deduct 37 per cent estimated exemptions (this percentage was derived from the 1954 figures for disbursements and exchange tax revenue)	235.3
Taxable base	US$400.7
Converted at official selling rate of ₱ 2.015 per US$1	₱ 807.4
Estimated yield	₱ 137.3

TABLE 4. REVENUE OF THE PHILIPPINE NATIONAL GOVERNMENT FROM GENERAL, SPECIAL, AND BOND FUNDS, FISCAL YEARS 1951–54[1]

(In millions of pesos)

	Fiscal Years Ended June 30			
	1951	1952	1953	1954
Import duties	26.7	32.2	28.3	35.2
Excise taxes	169.4	313.4	281.2	318.6
EXCHANGE TAX	*31.8*	*155.4*	*115.1*	*126.4*
License and business taxes	139.1	174.4	151.8	164.6
Income tax	77.6	97.9	117.5	108.2
Withholding tax	3.4	11.4		
War profits tax	0.1	0.2	0.1	0.1
Wharfage fees	3.8	3.8	4.6	5.0
Documentary stamp tax	5.4	7.8	6.9	6.6
Tonnage dues	0.5	0.6	0.7	0.8
Immigration tax	6.7	3.4	2.8	2.6
Inheritance tax	3.4	3.3	2.9	2.7
Franchise tax	2.2	1.9	1.7	2.4
Residence tax	4.1	4.5	3.9	4.1
Apportionments to local governments	−40.3	−55.8	−76.1	−59.4
Total revenue from taxation	402.1	599.0	526.3	591.4
Incidental revenue	7.5	8.7	7.9	8.8
Earnings and other credit	65.6	96.8	91.3	63.7
Repayment of advances	5.8	4.3	5.2	5.2
Extraordinary income	0.5	—	—	2.0
Transfers	0.0[2]	—	0.1	0.1
Total revenue and transfers	481.5	708.8	630.8	671.2

Source: Central Bank of the Philippines, *Annual Reports, 1952, 1953,* and *1954* (Manila, 1953–55).

[1] Totals may not equal the sums of the items because of rounding.

[2] Actual figure is 25,071 pesos.

The fiscal measures taken in 1951 seem to have had some degree of success. Total revenue from taxation increased from 442.4 million pesos in 1951 to 654.8 million pesos in 1952, or by nearly 50 per cent. It declined somewhat in 1953, but in 1954 it was about the same as in 1952. Certain of the tax measures, including the corporation income tax and stamp and excise taxes (those on distilled spirits, wines, and playing cards), have been extended by the Philippine Government. For 1954 and 1955, personal income tax rates were restored to the higher levels provided in the law which had expired in 1952, but the increased rates were not extended into 1956 by the 1955 session of Congress.

The 17 per cent tax might have been eliminated by increasing over-all taxation. In 1954, total revenue from taxation was about 9 per cent of national income. This is a relatively small amount when compared with the tax revenue of other countries. In the United States, for example,

revenue of the federal Government alone was 23 per cent of national income in 1954. Although fiscal revenue in the United States cannot be compared with that of the Philippines, some less industrialized countries have a higher ratio of tax revenue to national income; e.g., budget receipts in Cuba in fiscal 1954 were about 16 per cent of national income.

As in other underdeveloped countries, one of the most desirable ways of raising additional revenue in the Philippines would be through greater direct taxation. The Philippine fiscal system depends heavily on excise taxes (other than the exchange tax) and on license, business, and occupation taxes. In each of the four years, 1951 through 1954, these taxes brought in over half of the revenue from taxation before apportionment to local governments. Although such direct taxes as the income and withholding taxes were increased (and revenue from them in 1954 was 34 per cent greater than in 1951), these taxes, together with the inheritance, war profits, and residence taxes, accounted for less than one fifth of total tax revenues in 1954, while taxes on international trade, i.e., the exchange tax and import duties, were 25 per cent of the total.

The recent history of budget deficits in the Philippines emphasizes the importance of the revenue-earning capacity of the exchange tax. In each year after the war, the national Government had a deficit (with the exception of a slight surplus in 1948) until 1951–52, the first complete fiscal year after the introduction of the exchange tax, when there was a surplus of 73.4 million pesos. In 1953, there was a very small deficit, and the budget for that year could be considered as balanced, but in 1954 there was again a large deficit.

A tax that produced so much revenue as the exchange tax could not be eliminated by reducing budget expenditures. Moreover, a large part of the Philippine budget is accounted for by expenditures that are not likely to decrease and may even increase in the future. In 1951, 1952, and 1953, education and defense accounted for over 50 per cent of budget expenditures, and development expenditures for approximately another 25 per cent. In 1954, development expenditures increased to one third of total expenditures, and defense and education were slightly less than 50 per cent.

The exchange tax was not only a source of revenue; it also helped to check the demand for imports. Although the most effective restraint on imports is imposed by exchange control and licenses, a tax as large as 17 per cent was probably a deterrent to applying for licenses.[20] In fact, this was part of the initial purpose of the tax.

With balance of payments deficits continuing and with low external

[20] Prior to June 30, 1953, the Philippines had an import licensing system. After that date, the Central Bank took over the administration of the licensing system, and an application for a letter of credit is now considered to be an application for a license to purchase foreign exchange for the related imports.

reserves, this added check on imports was an important function of the exchange tax. For this reason, when alternative measures were being considered, revenue considerations alone could not determine the choice; the effect on imports of any alternative revenue measure also had to be taken into account. If it is assumed that taxes which operate directly on imports (e.g., exchange taxes, customs duties, etc.) are more effective in restraining import demand than taxes which operate indirectly on the demand for imports by influencing the level of total income or consumption (e.g., income taxes), then the range of possible alternative measures for the Philippine exchange tax was accordingly narrowed. For this reason, one of the most important alternatives considered, which is discussed below, was the revision of import duties.

The exchange tax may have had certain other effects which had to be taken into account when considering its replacement by any alternative. For example, the exchange tax may have tended to have certain protective effects on particular local industries. Determination of the particular industries or of the amount of the protection involved is always especially difficult when domestic prices of commodities similar to or substitutable for imported commodities are influenced by import and exchange controls as well as by a sizable exchange tax.

The tax may have been a deterrent to exports which contain imported materials. This consideration is undoubtedly not very important for the major exports of the Philippines, which are agricultural products or raw materials. But it might be important for new export industries, particularly in an economy promoting economic development.

The incidence of the tax also had to be considered. At present it is difficult to determine to what extent the tax fell on importers or the extent to which it was passed on to consumers through higher prices. Some figures suggest that importers bore a substantial portion of the tax. In 1951, for example, prior to the tax, the c.i.f. import price index was 6 per cent higher than the 1948–49 average, while retail prices of imported goods were 32 per cent higher. In 1952, following the imposition of the tax, the c.i.f. import price index changed very little (an increase of only 0.1 per cent), but the retail price index of imported goods declined by 5.1 per cent.[21]

The tax might have been a deterrent to foreign investment, since foreign investors had to pay the tax on the remittance of profits abroad. However, investors may have shifted the tax to consumers.

Agreement with United States

The opinion was often expressed that the most promising solution for removal of the exchange tax lay in the possibility of increased duties on

[21] Central Bank of the Philippines, *Annual Report, 1952* (Manila, 1953), p. 14.

imports from the United States. This involved revision of the Executive Agreement with the United States which had been reached in 1946 and which required duty-free treatment for trade between the two countries for 8 years (to July 1954) and then gradually increasing tariffs for 20 years. When the Bell mission of 1950 made its recommendations, it suggested that the agreement with the United States be re-examined. The Special Committee of the National Economic Council of the Philippines, which was appointed for this purpose, recommended revision, stating that "the free trade arrangements can also be considered as a major cause for the Government's continued financial difficulties . . . The Executive Agreement, in tying up the hands of the Government with respect to the imposition of tariffs on U.S. products, has removed one major source of revenue which no truly independent state can afford to forego."[22] The Committee also stated that the agreement discouraged the growth of local consumer goods industries, tended to encourage imports, caused a reduction in trade with other countries, and led to instability of the economy.

In July 1954, the duty-free arrangements between the two countries were extended until January 1, 1956; meanwhile, negotiation teams began to discuss the proposed revisions, and in December 1954 an agreement was signed. The revisions were approved by both Governments in mid-1955. One of the provisions was that, beginning January 1, 1956, the Philippines would impose a temporary special import tax, to replace the 17 per cent tax on sales of foreign exchange. Such action has been approved by the Philippine Congress. The items which have been exempt from the exchange tax will also be exempt from the import tax. The import tax will apply only to merchandise items, whereas the exchange tax has applied also to invisibles. The import tax is to be 17 per cent for the first year; it is to be reduced by 10 per cent of the initial rate each year, beginning with January 1, 1957, until it is eliminated on January 1, 1966. The importance of the revenue yield of the exchange tax is emphasized by one of the provisions of the import tax law: if the total revenue derived from the customs duties and from the special import tax on goods imported from the United States is less in any calendar year than the proceeds from the exchange tax on such goods during the calendar year 1955, the Philippine President may suspend the reduction of the special import tax for the next calendar year, and may increase the special import tax on all goods coming from any country to any previous rate which is considered necessary to restore revenues to the 1955 level. Other provisions in the revisions to the U.S.-Philippine agreement also

[22] *Ibid.*, p. 402.

are significant in respect of revenue; for example, taxes on exports are no longer prohibited, the timetable for applying U.S. duties on imports from the Philippines has been expanded, and, most important, the application of Philippine duties on imports from the United States has been accelerated. Also, the agreement provides for the removal of most of the absolute quotas on Philippine goods entering the United States.

Although the exchange tax has been removed and a substitute measure imposed, additional revenue is needed to meet rising government expenditures. The most recent annual report of the Central Bank of the Philippines, written when it was apparent that the agreement with the United States would be revised, recommends, among other things, that the Philippines re-examine the present tax exemptions for new and essential industries, revise the tariff, and undertake a thorough economic study of the fiscal system.

Venezuela: Penalty Export Rate

The experience of Venezuela illustrates the situation that arises when foreign companies are not required to surrender the exchange proceeds earned from their exports, but meet their local currency requirements for operating expenses by exchanging part of their foreign exchange earnings at a special appreciated rate; this rate is sometimes called a "penalty export" rate, since it is less than an "equilibrium" rate or than the par value or official rate. For their local currency requirements, foreign oil companies in Venezuela surrender export proceeds at the rate of 3.09 bolívares per U.S. dollar, whereas the Venezuelan par value is 3.35 bolívares per dollar. If the total amount of foreign exchange sold by the oil companies to the Central Bank in any given year exceeds the volume of exchange sold by the Bank on the internal market, an even lower rate, that is, a still more appreciated rate, 3.046259 bolívares per dollar, is applied to the difference. This rate is applied by means of a repayment to the Bank by the oil companies of bolívares equivalent to the excess of purchases over sales multiplied by .043741, the difference between the two rates. The 3.046259 rate, which was introduced during World War II, corresponds to the old gold import point.

The application of penalty rates may produce revenue for the Government if the foreign exchange so acquired is subsequently sold at a more depreciated exchange rate. It is possible, of course, that penalty export rates may yield no actual revenue to the Government; for example, when the foreign exchange acquired is used for government foreign exchange requirements calculated at the same rate of exchange. In any event, the

penalty rate may be regarded as equivalent to a flat-rate tax on the domestic expenses of the company.[23] Any penalty rate may be considered a "tax" in the sense that certain income is withheld from particular exporters by making the exchange requirements imposed upon them less favorable than those imposed on other exporters, or by applying to them a rate more appreciated than is paid by importers. Hence, if penalty rates on the transactions of foreign companies are eliminated, substitute measures for equivalent revenue or equivalent taxation applied to the income of foreign companies are often required.

The official selling rate for the bolívar is 3.35 bolívares per U.S. dollar, the same as the par value; the buying rate fluctuates around 3.325 bolívares per dollar, and applies to all purchases of exchange except those from the petroleum companies and from cacao and coffee exporters. The Central Bank sells most of its exchange to commercial banks at the interbank rate of 3.335 bolívares per dollar, and the commercial banks resell this exchange to the public at 3.35 bolívares per dollar. Thus, there is a spread of 0.26 bolívares per dollar between the exchange purchased from oil companies at the rate of 3.09 bolívares per dollar and exchange finally sold to the public. Of this spread, a small portion—.015 bolívares per dollar—accrues to the commercial banks.

Some of the exchange acquired by the Central Bank is used for government payments at the preferential rate of 3.09 bolívares per dollar. Moreover, the Government may use some of the local currency to pay more favorable rates of exchange to cacao and coffee exporters, depending on world prices for these commodities. The proceeds of exports of coffee and cacao are surrendered at the rate of 3.325 bolívares per dollar; but as international prices of cacao and coffee decline, these rates may go to 4.25 for cacao and unwashed coffee and to 4.80 for washed coffee. When these special rates are used, this disbursement of local currency may be considered as a way of utilizing the revenue from the exchange system. The favorable rates for coffee exports have not been used recently, however, since the international coffee price has been higher than the price to which the premium rates apply; therefore, for the years considered here, the special rate has applied only to cacao.

Total sales of exchange by the Central Bank in 1953 were equivalent to US$721.1 million.[24] It seems reasonable to assume that these were sales of exchange purchased earlier from the oil companies. Central Bank purchases of exchange in any year from sources other than the oil com-

[23] For a further discussion of the tax, exchange, and other features of penalty rates, see W. John R. Woodley, "The Use of Special Exchange Rates for Transactions With Foreign Companies," *Staff Papers*, Vol. III, No. 2 (October 1953), pp. 254–69.

[24] The statistical data used in these computations are from Banco Central de Venezuela, *Memoria, 1951, 1952,* and *1953* (Caracas, 1952–54).

panies are very small, and its purchases of exchange from the oil companies during 1953 exceeded its total sales; therefore, it would be logical to assume that in effect it was selling exchange which it had purchased at the cheapest rate. Further, there is a possibility that exchange purchases from the oil companies in any year may be carried over and sold during subsequent years. At a spread of 0.26 bolívares per dollar, the revenue earned on $721.1 million would be 187.5 million bolívares.

The arrangement for repayment by the oil companies of the difference between 3.09 bolívares and 3.046259 bolívares when purchases from the oil companies exceed sales of exchange in the internal market produced further revenue for the Government in 1953. If the internal market in which the Central Bank sold exchange to private importers is measured by reference to its sales to commercial banks and to other nongovernment purchasers (less the Central Bank purchases of foreign exchange arising from coffee and cacao exports, as stated in the agreement with the oil companies), and the foreign exchange resulting from the sale by the Government of petroleum accepted as payment of taxes in kind is excluded from purchases, the excess of oil company sales of exchange over Central Bank sales was $114 million. This would mean an additional local currency payment by the oil companies to the Central Bank of 5.0 million bolívares, and would raise the total revenue figure to 192.5 million bolívares.

The Central Bank usually transfers its exchange profits to the Government toward the end of the calendar year. The reported figure for this transfer in 1953–54 was less than 192.5 million bolívares. Part of this discrepancy may be explained in terms of certain deductions. It may be estimated that 9.7 million bolívares accrued to the commercial banks through purchases at the interbank rate; 19.2 million bolívares may be taken as the cost of government exchange purchases;[25] and 9.2 million bolívares was the cost of subsidizing purchases of cacao export proceeds. Also, the Central Bank receives a fee for its services which is estimated to have been 1.2 million bolívares in 1953.

With allowance for these deductions, the approximate "profit" on exchange operations in 1953 would be 153.2 million bolívares. Similar calculations for 1951 show a net profit of 126.2 million bolívares and for 1952 of 140.7 million bolívares. The deduction on account of government payments at the preferential rate is, of course, to be regarded as merely a nominal "loss" in the sense that potential profits from the sale of exchange to the public did not arise. The deduction should be made, how-

[25] Government exchange purchases amounted to US$73.89 million: $51.27 million represented purchases by the national Government; $0.32 million, purchases by the governments of the federal district and states and federal territories; and $22.3 million, purchases by other government agencies, e.g., Banco Agrícola y Pecuario.

ever, since the gross estimates of receipts (before such deductions) involve the assumption that all foreign exchange purchased from the oil companies is sold at a spread of 0.26 bolívares per dollar.

These figures are a closer approximation to the Venezuelan record of profits on exchange operations. The estimate for 1953 exceeds by 16.3 million bolívares the amount reported as being transferred from the Central Bank to the national Government in 1953–54, and there are similar discrepancies of about 10 per cent in 1951 and 1952. The fact that the calculations above were made on the basis of the Central Bank's total exchange purchases from oil companies may account for part of the difference. Also, it may be that a portion of exchange profits is not transferred to the Government but is retained as a reserve in the event that subsequent purchases may be substantially greater than sales. Hence, profits transferred to the Government may tend to be less than those currently earned.

The importance of the revenue from the Venezuelan system of penalty rates may be gauged by comparing it with the revenue from other sources. The estimate of 192.5 million bolívares for gross receipts in 1953 is equivalent to about 7 per cent of 1953–54 total revenue; and the "net profits" estimate of 153.2 million bolívares is equivalent to about 6 per cent. As shown by Table 5, exchange profits reported as "transferred to the Government" accounted for approximately 5 per cent of total national revenue in recent fiscal years.

Compared with other tax sources, revenue from exchange operations is not large. The three most important tax sources—petroleum royalties, the income tax, and customs revenue—together account for nearly 80 per cent of total national revenue. The revenue from exchange operations is only a little more than one-fourth that from customs duties.

The relatively small revenue earned suggests that this aspect of Venezuela's penalty export rate is not very important, especially since Venezuela has had a Treasury balance as a result of earlier budget surpluses. Neither has the penalty rate any balance of payments purpose. The present exchange rate structure must indeed be regarded as one of the fiscal devices whereby Venezuela is attempting to reduce its extreme dependence on the oil industry. Although the economies of several countries are "one-crop export economies," the degree of dependence is seldom so great as in Venezuela. The oil industry provides not only about 98 per cent of the country's official foreign exchange receipts, but also more than 60 per cent of the government revenue. The taxes imposed on the petroleum companies include exploration taxes, royalties and income taxes, and customs duties, in addition to the penalty exchange rate. In 1953 the oil companies paid taxes of 1,486 million bolívares, or 56 per cent of total government revenue for

TABLE 5. ACCOUNTS OF THE VENEZUELAN NATIONAL GOVERNMENT, FISCAL YEARS 1951–54

	Fiscal Years Ended June 30							
	1951		1952		1953		1954	
	Million bolívares	Per cent	Million bolívares	Per cent	Million bolívares	Per cent	Million bolívares	Per cent
Petroleum royalties	783.8	37.1	811.5	35.6	763.4	32.2	900.2	33.8
Customs revenue	465.2	22.0	472.9	20.7	456.5	19.3	469.8	17.7
Income tax	456.7	21.6	579.4	25.4	657.9	27.8	753.8	28.3
Liquor and cigarettes	136.7	6.5	151.4	6.6	158.1	6.7	165.9	6.2
EXCHANGE PROFITS	110.7	5.2	113.9	5.0	125.8	5.3	136.9	5.2
Stamp tax	60.3	2.9	64.0	2.8	74.3	3.1	81.2	3.1
Miscellaneous	98.1	4.7	89.0	3.9	133.3	5.6	152.2	5.7
Total revenue	2,111.6	100.0	2,282.2	100.0	2,369.4	100.0	2,660.0	100.0
Total expenditure	2,134.4[1]		2,420.9[2]		2,426.0[3]		2,433.5[4]	
Increase (+) or decrease (−) in Treasury balances	−22.8		−138.7		−56.6		+226.5	

Source: Ministerio de Hacienda, *Boletín de Información Fiscal* (Caracas).
[1] Including 76.4 million bolívares applicable to the 1949–50 budget.
[2] Including 123.4 million bolívares applicable to the 1950–51 budget.
[3] Including 140.8 million bolívares applicable to the 1951–52 budget.
[4] Including 112.5 million bolívares applicable to the 1952–53 budget.

1953–54;[26] if revenue from the exchange system is included, the percentage is about 61.

The present exchange structure is thus designed to build up other industries and agriculture—sometimes referred to as the "sow-the-oil" policy. Partly because of the inflationary effects of the high wages of oil employees, costs of production in other industries are high. In addition to the provision for subsidizing coffee and cacao through the exchange system and the granting of some direct subsidies, other measures have been taken to increase agricultural production, to provide electricity in certain areas, to encourage immigration of agricultural workers, and to provide irrigation projects. Funds set aside in the budget for investment go to such agencies as the Banco Agrícola y Pecuario, the Corporación de Fomento, and the Instituto Agrario Nacional, where it is made available for productive purposes.

In general, government expenditures are of great importance in the Venezuelan economy. National budget expenditures in 1952–53 were equal to 26 per cent of the national income in 1952. A large portion of government expenditures is spent on development, public works, and similar activities. In the 1954 budget, 123.1 million bolívares was allotted to the Department of Development and 730.1 million bolívares to the Department of Public Works; the allotments to these two departments amounted to about 35 per cent of total budgeted expenditures. Large allowances (a total of 19 per cent) were also made to the Departments of Health and Social Welfare, Education, Labor, and Agriculture.[27]

As revenue has increased, expenditures for activities related to development have mounted. Revenues increased by 50 per cent between the fiscal years 1943 and 1945, following the enactment of the income tax law and the hydrocarbon law. Since then, increases in income tax rates have been made in several years, and the collection of petroleum royalties in kind for subsequent resale at premium prices became effective in 1946-47.[28]

Venezuela has an inheritance and gift tax and an income tax. Income tax rates are quite low, however, with the basic tax rate ranging from 1 per cent on wages and salaries of residents to 4 per cent on nonresidents' earnings in noncommercial professions, and the exemption limit is fairly high. There is also a progressive surtax rising from 1½ per cent on incomes over 9,000 bolívares to 26 per cent on incomes over 28 million bolívares, and, finally, there is an "additional tax" on net income

[26] Banco Central de Venezuela, *Memoria, 1953* (Caracas, 1954), pp. 105–106.
[27] Ministerio de Hacienda, *Boletín de Información Fiscal* (Caracas), July 1954.
[28] International Bank for Reconstruction and Development, *Report on the Economy of Venezuela* (Washington, January 1949, mimeo.).

from mining or petroleum.[29] (Among the provisions of a law effective January 1, 1956 were an increase to 7 per cent of the tax rate on nonresidents' earnings in noncommercial professions and removal of the 9,000 bolívares exemption for payment of the surtax, although certain exemptions to the payment of the surtax for natural persons were provided.)[30] In the last three years, revenue from direct taxes increased by about 65 per cent, while total revenue rose by 26 per cent (Table 5).

Under the circumstances of increasing revenues and concentrated development, the exchange rate structure assumes a meaning which goes beyond straight revenue considerations. It becomes involved in a complex of fiscal considerations relating to the economic structure and future growth of the economy. Given these objectives, substitute measures for the penalty export tax necessarily involve also the whole complex of relations between Venezuela and the foreign oil companies.

If the penalty rate were removed and no offsetting taxes were imposed, there would be a loss of foreign exchange to the Government, since the foreign companies would need to convert fewer dollars to obtain the local currency with which to cover their local currency expenditures. Also, the incidence of the present tax structure would probably be shifted to other sectors of the economy, which may be less able to pay.

On the other hand, some factors suggest that eventual elimination of the penalty rate would not present insurmountable problems. If the oil companies were to receive the same rate as other exporters (other than cacao and coffee exporters), the Government might recoup some part of the revenue loss under a special provision of the income tax law which imposes the "additional tax" mentioned above. The law provides that taxes paid by any foreign oil company to the Government shall be deducted from the company's total profits, and that the company will then pay to the Government 50 per cent of the excess of the remainder over the taxes already paid. This means that at least 50 per cent of the oil companies' profits are paid to the Government. A specific illustration suggests how the law operates. Assume company profits of 100 and taxes of 30. When taxes are deducted from profits (100 minus 30), the difference, 70, exceeds taxes paid by 40. Fifty per cent of 40, i.e., 20, is added to the taxes paid; therefore, 50 or one half of total profits, goes to the Government. If total profits had been only 40, the remainder would be 10, or less than the taxes paid, and no further payment would be required. Therefore, it would appear that, if company profits in domestic currency were to increase as a result of rate unification, at

[29] Department of Commerce, *Investment in Venezuela* (Washington, 1953).
[30] *Foreign Commerce Weekly* (Washington), September 5, 1955, p. 6.

least half of the increased profits would go to the Government. Admittedly, however, this increase in tax revenues from foreign companies is less direct, and may be smaller, than the revenue obtained from application of the penalty rate.

As local industries develop, the oil companies may also make additional local purchases. Import statistics show that in 1953 the petroleum companies imported about 19 per cent of the value of Venezuela's total imports.[31] Some of these imports might eventually be provided in part by local industries. In this connection it is interesting to note that only a little more than half the value of total petroleum exports is converted by the petroleum companies into bolívares, and that this proportion has decreased sharply since the early postwar period. Although the total value of exports of petroleum increased by about 242 per cent between 1946 and 1953, the exchange negotiated increased by only some 150 per cent.

Rate unification would presumably be accompanied by a new agreement between the Government and the oil companies, which might well provide for additional taxes on the oil companies.

Conclusion

The analysis of the recent exchange history of Cuba, Nicaragua, the Philippine Republic, and Venezuela has illustrated the frequent use of multiple exchange rates as a source of revenue when the imposition of other forms of taxation is impeded by administrative and other difficulties. Generally, in countries that use multiple rates, the easiest alternative source of revenue would be export and import taxes. But while the economic effects of these taxes may be substantially the same as the economic effects of multiple rates, there are a number of reasons why some countries prefer to utilize multiple rate practices rather than impose additional export and import taxes. The imposition or alteration of import and export taxes generally requires legislative action, while multiple rates are often administratively determined. International arrangements and commitments frequently limit the use of tariff or other import taxes. In order to raise the same amount of revenue, export and import tax rates would in many countries have to be raised to impractically high levels. Indirect taxation has already been utilized to such an extent in some of them that it is considered better to explore the possibilities of direct taxation as a means of obtaining further revenue; while exploring these possibilities, a country may prefer to use some other device as a temporary revenue measure rather than resort to increased

[31] Banco Central de Venezuela, *Memoria, 1953* (Caracas, 1954), p. 82.

export and import taxes, which may be regarded as having more permanent implications.

If, on the other hand, countries which rely on multiple rates attempt to extend direct taxation, they may be confronted with new economic and administrative difficulties. Countries for which multiple rates are important revenue earners are generally comparatively underdeveloped, with the great majority of the population receiving very low incomes. Under such circumstances, fiscal devices that are the major revenue earners for more developed economies may not be practicable. The monetary sector of the economy is likely to be limited, many people living mainly on their own production and resorting to barter where exchange is necessary. Direct taxation aimed at bringing in substantial yields might have to take the form of taxes in kind, which would create further difficult problems. Moreover, wide disparities in income distribution may make income taxation an unsuitable fiscal instrument in underdeveloped countries. In the absence of a substantial middle income group, there may not be a sufficiently broad base for an effective income tax system. There are few taxpayers with high incomes and, if rates are too high, it may be feared that the incentive to accumulate capital for investment, which has become of increasing concern to these countries in recent years, will be impaired.

Direct taxes, including an income tax, are imposed in the countries studied in this paper, but the returns have usually been notably less than was expected when the legislation was passed. Administrative difficulties —an illustration of which is given above in the section on Cuba—explain in part these disappointments. Those able to pay and required to do so by law may evade the tax. In some countries, stricter tax enforcement with stiff penalties for evasion seems to be needed.

A recent report by the United Nations states that, in principle, the development of income and other direct taxes would be a satisfactory and equitable method of securing a tax structure that would be capable of controlling inflationary pressures arising from public spending, that would extend the incidence of taxation, and that could be chosen so that growth of revenue would accord with the progress of development. Yet the report concludes that "administrative difficulties alone are likely to prevent any great or early progress in this direction in most countries except such as may be secured by the more efficient use of existing tax machinery."[32] It is significant that Venezuela is the only country among the four studied here where receipts from exchange profits have not exceeded receipts from income tax.

Some countries have had exchange taxes for a long time. As pointed

[32] Economic Commission for Asia and the Far East, *Economic Survey of Asia and the Far East, 1953* (Bangkok, 1954), p. 19.

out above, Cuba has had an exchange tax since 1925. Although the decree for the present agreement between the Central Bank of Venezuela and the oil companies was promulgated in 1944, the oil companies, by agreement with the Government, have since 1934 exchanged part of their foreign exchange earnings at an appreciated rate. Taxpayers are thus accustomed to being taxed through the exchange system, and the Government may hesitate to alter the arrangement. The changes that would be necessary if new administrative machinery had to be set up for the collection of alternative taxes might have disruptive effects.

In contrast to the administrative difficulties of direct taxation, the administration of multiple rates is easy. To obtain revenues through the exchange system, a country does not need a well-trained staff of civil servants. The matter can simply be handled through the banking system. In underdeveloped countries trained personnel are scarce, and the banking system may be considered less susceptible to pressure.

Even when the exchange tax or exchange spread is very small, multiple rates are, generally, not merely a small marginal source of revenue; the revenue collected is sizable, even in comparison with total revenue, but especially in comparison with revenue from other individual tax sources. In many countries, only customs duties are a more important single source of revenue. Revenue yields from any individual excise tax, such as tobacco, liquor, and gasoline taxes, individual business taxes, license fees, motor vehicle fees—not to mention direct taxes, such as income, property, inheritance, and estate taxes—tend, in general, to be much smaller than exchange profits. Usually, it is only when yields from all excise taxes, or all business and occupation taxes, or all indirect taxes other than import duties, are grouped together that the yields from these sources may be comparable with the yields from multiple exchange rate systems. Even when this grouping is made, the yields from exchange systems are still significant. Their contribution to the national government's total budget revenue ranges from about 5 per cent in Cuba to about 25 per cent in the Philippines.

Even when receipts from exchange profits are relatively small, they may have more importance than might at first appear, for they may bring in considerably more revenue than many other single sources. In some countries—for example, in Cuba—total revenue is built up from a large number of sources, no one of which is of great significance. In Nicaragua the situation has been similar. In 1953–54 almost three fourths of the total revenue came from numerous small sources, the receipts from each of which were smaller than the receipts from exchange surcharges alone.

If revenue from the exchange system tends increasingly to become an

integral part of the revenue system, the elimination even of relatively minor multiple currency practices may make necessary a thoroughgoing fiscal reform. Even where multiple rates have been adopted for purposes other than revenue, the revenue which in fact they yield may constitute a reason for maintaining them after their original justification has disappeared. This is all the more likely since countries that use multiple rates have in recent years been faced with an increasingly urgent need for additional revenue.

In all of the countries considered in this study, there have been rapid increases in government expenditures in the past few years. Development and defense are the outstanding items that have caused these increases. As a result, countries that instituted multiple currency practices for reasons other than revenue have eventually found their revenue-yielding features increasingly important and, accordingly, the problem of finding alternative sources of revenue before multiple exchange rates can be eliminated has become more acute.

In most cases, even where only small sums are involved, the installation of alternative sources of revenue is likely to require fiscal reform. All the other readily available sources have usually been used to the full; higher rates for other forms of taxation may not yield higher revenue; the introduction of a few new taxes (usually excise taxes) will generally not yield sufficient revenue; the fiscal system is already burdened with the number of indirect taxes which produce little revenue. If there are any sources from which additional revenue can be raised quickly, they are more likely to be used to ease budgetary deficits or to help finance further additional expenditures than to replace revenue from multiple rates. The one alternative which seems feasible is additional import and export taxes. Administration through the customs may be almost as simple as through the central bank, and the amounts of revenue raised and the economic implications and effects on the balance of payments would probably be very similar. However, even such a shift may often require a fiscal reform, except where the revenue-producing multiple rate is a simple, generally applicable, exchange tax. A general exchange tax might then conceivably be converted easily into a general import or export tax. However, if much of the exchange tax revenue comes from its application to invisibles and capital transactions, the yield of a general export or import tax imposed as a substitute might be inadequate; where the revenue from the multiple rate system is derived from more complex arrangements, a shift to import and export taxes might require the imposition of several such taxes and much higher tax rates, perhaps with some commodity differentiation, and these shifts might themselves almost amount to a fiscal reform. In any event, expanding revenue requirements often indicate the desirability of fiscal

reform, and the elimination of the revenue features of multiple currency practices must, therefore, usually be considered in a wider setting.

In considering the relative merits of multiple rates and of alternative forms of taxation, attention has also to be given to the problem of incidence. In general, the incidence of multiple rates that produce revenue is similar to that of import or export duties. Under certain conditions of elasticity of supply and demand, part of the burden of import (or export) duties can be shifted abroad. It is doubtful, however, whether this possibility has much practical importance for the countries considered in this study. The world elasticity of demand for the products of small countries, whose exports are only a relatively small proportion of total world supply, is probably large, and perhaps can be regarded as infinite. Similarly, the world elasticity of supply of the goods imported by small countries may be regarded as large. Furthermore, at present, with inflationary conditions and large demand for imports for development in most of the countries that use multiple rates, the import demand of those countries is relatively inelastic, and most of their exports consist largely of raw materials, the supply of which is also relatively inelastic. Under these circumstances, multiple rates may have the effect of siphoning off the windfall profits of local importers or of preventing higher incomes from accruing to local exporters. In any event, the relative incidence of any revenue instrument upon foreign and domestic groups must always be taken into account when comparing the fiscal implications of a multiple rate practice and of an alternative source of revenue, and governments are naturally especially concerned with the purely domestic incidence of their taxation measures. These considerations, no less than the economic and administrative obstacles associated with alternative forms of revenue, may increase the difficulties of replacing revenue obtained from multiple rate systems.

In order to be an effective substitute, any alternative source of revenue, or series of alternative sources, must bring in at least as much revenue as the present exchange system. In general, no one substitute tax by itself is likely to be adequate. Usually, a series of tax measures is necessary, and this conclusion may be reinforced by other considerations connected with the incidence of taxation and by the fact that multiple rates often serve more than one purpose. The "alternative measure" thus becomes a series of alternative measures, possibly involving the introduction of several new taxes, a revision of tax rates and of the bases of several existing taxes, a revision of the tariff, and tighter and reformed fiscal administration. In such a situation, the elimination of the revenue aspects of multiple rates is necessarily closely geared to a thoroughgoing fiscal reform rather than to the introduction of any one particular new or revised tax. This means, further, that, in analyzing

the relative merits and disadvantages, or the economic effects, of multiple exchange rate systems as sources of revenue, a comparison with any specific form of tax, e.g., excise tax, customs duty, consumption tax, income tax, is usually less appropriate than a comparison with a given combined *series* of alternative taxes.

The questions that arise in a consideration of alternative sources of revenue are likely to be questions of substance and not merely of the form of taxation. It is sometimes contended that a shift from an exchange tax to another type of tax would be merely formal, and that the alternative would tend to have the same substantive economic effects. However, if the shift requires a group of alternative taxes, the economic effects are not likely to be identical; indeed, a series of tax measures might be devised the economic effects of which, in combination, might be more desirable than the economic effects of the exchange practice. Further, when a series of tax measures is considered as a whole, the disadvantages of any particular type of measure become a less important reason for not replacing exchange revenue with tax revenue. It may still be proper to resort to certain taxes, even if their imposition creates difficulties. Any analysis of revenue alternatives necessarily involves an analysis of the entire fiscal system and of its prospective tax and revenue sources, and cannot be limited to the economic effects or implications of any particular type of tax.

International Movements of Public Long-Term Capital and Grants, 1951-52

Jean Barnérias*

THIS PAPER PRESENTS DATA on international movements of public long-term capital and grants for the years 1951 and 1952, comparable to those covering the five postwar years 1946–50, published earlier.[1] As before, *public* capital movements are defined as loans and repayments actually disbursed, to which at least one party is a government or which affect the long-term foreign asset and liability position of a government; and *long-term* capital movements are defined as loans with maturities of more than one year.[2] Short-term capital movements and private long-term capital transfers to which both parties are private have not been included. *Grants* include all public unilateral transfers other than grants for military assistance. Transfers of *public funds* include public long-term capital and public unilateral transfers.

Since reasonably precise information about capital movements to which both parties are private is still not available, the net movements shown cannot be taken to represent fully the extent to which particular countries or areas benefited from or contributed to international transfers of resources.

Summary of Findings

The major characteristics of the 1951–52 capital movements represent, for the most part, a continuation of trends observable during 1946–50. The gross movements of public funds have continued to decline. After

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[1] Mervyn L. Weiner and Romeo Dalla-Chiesa, "International Movements of Public Long-Term Capital and Grants, 1946–50," *Staff Papers*, Vol. IV, No. 1 (September 1954), pp. 113–78.

[2] For a more exact set of definitions, see Mervyn L. Weiner and Romeo Dalla-Chiesa, *op. cit.*, pp. 149–51.

falling year by year, from $14.6 billion in 1946 to $9.8 billion in 1950, the gross movement declined to $7.7 billion in 1951 and $7.2 billion in 1952. The magnitude of these public capital movements has been declining not only absolutely but also relative to the movements of resources that they helped finance (Table 1).

TABLE 1. COMPARISON OF GROSS MOVEMENTS OF PUBLIC FUNDS AND WORLD TRADE, 1948, 1950, AND 1952

	1948	1950	1952
Public funds (billion U.S. dollars).....	12.3	9.8	7.2
World imports c.i.f. (billion U.S. dollars)[1].	60.2	59.2	80.2
Public funds as per cent of world imports....	20	17	9

[1] From *International Financial Statistics* (Washington).

The United States has been the largest single net supplier of public funds throughout the postwar period, though the amounts supplied have been declining; through 1951, Western Europe was the largest single recipient. The net amount of public capital received by underdeveloped areas during this period has been increasing, however; and in 1952, for the first time in the period covered, this group supplanted Western Europe as the largest recipient of such funds (Table 2). Since the public capital receipts of the European dependencies, virtually all of which have come from Europe, have regularly accounted for about one half of the public capital receipts of the underdeveloped country group, Europe has continued to be a major channel for the transfer of public funds from North America to underdeveloped areas.[3] International organizations have also continued to provide channels for the triangular transfer of public funds. Since the cessation of the large-scale early postwar European relief and reconstruction programs, the public funds exported by these organizations have been made available almost entirely to underdeveloped areas.

Movements of Public Funds, 1951–52

MOVEMENTS TO AND FROM THE UNITED STATES

In 1951–52, as in the previous period, the United States was the main source of public funds for the rest of the world (Table 3). It made available to other countries $7.7 billion (excluding military aid), or just over half of the $14.8 billion of public funds that were transferred between

[3] The countries included in this classification are indicated below.

TABLE 2. NET RECEIPTS OF PUBLIC FUNDS, BY AREA, 1946–52

(In billions of U.S. dollars)

Area	1946	1947	1948	1949	1950	1951	1952	Total
United States	−6.2	−7.4	−5.3	−5.5	−3.5	−3.4	−2.5	−33.8
Canada	−0.8	−0.6	[1]	−0.1	0.2	0.1	−0.1	−1.3
Western Europe	4.3	5.3	5.2	3.7	2.1	1.5	0.7	22.8
Independent sterling area	−0.2	−0.2	−0.3	0.3	[1]	0.2	0.3	−0.1
European dependencies	0.2	0.3	0.4	0.7	0.5	0.5	0.8	3.4
Latin America	−0.3	−0.3	−0.8	[1]	[1]	0.1	0.1	−1.1
Eastern Europe	1.3	0.3	0.1	[1]	[1]	−0.1	0.1	1.9
Other countries	1.3	0.7	0.7	0.8	0.7	0.6	0.5	5.3
International organizations	0.4	1.7	−0.1	[1]	[1]	0.2	0.2	2.4

[1] Less than 0.05.

TABLE 3. INTERNATIONAL MOVEMENTS OF PUBLIC LONG-TERM CAPITAL AND GRANTS, 1951–52[1]

Receiving Countries or Areas	Payments by Countries or Areas (billion U.S. dollars)						Total Receipts	
	United States	Canada	Western Europe	Underdeveloped Countries	Int. Organizations	Other Countries and Unallocated	Billion U.S. Dollars	Percentage Distribution
United States	—	0.6	0.8	0.3	0.1	—	1.8	12
Canada	0.6	—	0.1	—	—	—	0.7	5
Western Europe	4.6	—	1.5	0.4	0.1	—	6.6	45
Underdeveloped countries	1.4	—	1.5	0.1	0.7	0.1	3.9	26
International organizations	0.7	—	0.2	0.1	—	0.1	1.3	9
Other countries and unallocated	0.3	—	0.2	—	—	—	0.6	4
Total payments	7.7	0.7	4.4	0.9	0.9	0.2	14.8	100
Percentage distribution	52	5	30	6	6	1	100	

[1] Totals may not equal the sums of the items because of rounding.

countries—the same proportion as for the years 1946–50. The largest part ($5.2 billion) of this amount was made available in the form of grants. Loans amounted to $2.4 billion, and repayments to only $0.1 billion. During this same period the United States received $1.8 billion from the rest of the world, mainly in the form of repayments.

All the grants and half of the loans were extended under the government aid program. The largest part of the grants ($3.9 billion) went to Western Europe; Japan, Israel, and Taiwan were the principal other country recipients of U.S. grants. Western Europe was the principal recipient of U.S. loans extended under the government aid program; Argentina and India were the largest other borrowers.

Private bank lending to foreign governments and private transactions in foreign public securities accounted for that half of U.S. loans not made available under the aid program. Private U.S. lending to public borrowers amounted to $1.1 billion. Most of this consisted of new capital issues in the United States by foreign public bodies: $0.4 billion by Canada, $0.3 billion by the International Bank for Reconstruction and Development, and $0.1 billion by Israel. Loans made by U.S. banks and purchases of outstanding foreign securities resulted in the additional export of $0.3 billion.

The principal offsetting items to the outflow of U.S. capital were $0.7 billion of amortization and redemption of bonded public debt held in the United States, and repayments on medium-term private bank credits, mainly by Canada; and $0.9 billion covering repayments of loans and returns on grants, mainly by Western Europe.

Movements to and from Canada

Over four fifths of the movements of public capital and grants to and from Canada consisted of transactions in public securities with the United States. As in earlier years, however, these transactions were largely offsetting. During 1951–52 they resulted in a net outflow of only $7 million to the United States. To the rest of the world, Canada made $65 million available by lending to the IBRD (through releases of its local currency subscription and through purchases of IBRD bonds and the bonds of borrowers from the IBRD), by making grants to India and Pakistan under the Colombo Plan, and by making subscriptions to the UN Relief and Technical Assistance Organizations. These outflows of public funds were more than offset, however, by the receipt of repayments from other, mainly European, countries. Transactions between Canada and the rest of the world thus resulted in a small net inflow of public funds into Canada during the two years.

[1] Totals may not equal the sums of the items because of rounding.

Movements to and from Western Europe

In 1951–52, the principal international transfers of public financial resources continued to be made to Western Europe. Western European countries received $6.6 billion, or 45 per cent of the total gross transfers of public funds that were made. Of the total amount received, $1.5 billion represented intra-European capital movements; most of the remaining $5.1 billion represented public funds received from the United States. Largely because of substantial repayments to the United States and new public capital transfers to underdeveloped countries, however, net receipts by Western Europe were only $2.2 billion.

The larger part of the $4.6 billion of U.S. funds to Western Europe was made available as grants under the Mutual Security Program; loan funds amounted to only $0.6 billion. These loans and grants were received mainly by France ($0.9 billion), the United Kingdom ($0.7 billion), West Germany ($0.5 billion), and Italy ($0.5 billion). Net receipts, however, were $3.8 billion. The principal return flow consisted of $0.6 billion of repayments, mainly by France, the United Kingdom, the Netherlands, Italy, and Germany.

The largest outflow of public funds from Western Europe ($1.2 billion net) was to underdeveloped countries, principally to overseas dependencies. France was by far the largest single capital exporter to these areas, contributing $0.9 billion net, mainly as grants, to its overseas dependencies. French capital exports to its overseas dependencies, not including military expenditures in Indo-China, were much larger than the economic aid received from the United States during this period. The United Kingdom, the second largest single capital exporter, made $0.4 billion gross available to underdeveloped countries, almost entirely to its colonies and the independent sterling area. But since these capital exports were largely offset by repayments from the independent sterling area and Latin America, the net capital export of the United Kingdom to underdeveloped countries amounted to only $0.1 billion.

One third of the gross public capital exports of Western European countries, and one fourth of their receipts, consisted of loans, repayments, and grants made to other European countries. More than half of these intra-European transfers were intimately linked with the working of the European Payments Union. Grants extended between EPU member countries under "initial balances" and "special resources" amounted to over $0.3 billion, and repayments under "existing resources" to $0.4 billion. Of the $0.2 billion of loans effected outside the EPU, Yugoslavia received loans from the United Kingdom, Belgium, and Germany; Switzerland made loans to Belgium and France; Belgium made a loan to the United Kingdom; the United Kingdom made a loan to the Netherlands; and the Bank for International Settlements made a loan to France. The grants made outside the EPU were prin-

cipally reparation payments by Italy to Greece, Yugoslavia, and France, and French grants-in-aid to Yugoslavia. On a net basis, Germany, the United Kingdom, and Denmark were exporters of public funds to other European countries; Greece, Yugoslavia, Austria, and Ireland were the principal recipients of these transfers (Table 4).

TABLE 4. NET INTRA-EUROPEAN MOVEMENTS OF PUBLIC LONG-TERM CAPITAL AND GRANTS, 1951–52

Net Exporters[1]		Net Importers			
Country	Million U. S. Dollars	Country	Million U. S. Dollars	Country	Million U. S. Dollars
West Germany	111	Greece	206	Belgium-Luxembourg	30
United Kingdom	60	Yugoslavia	83	Sweden	24
Denmark	46	Austria	81	Switzerland	19
Italy	25	Ireland	62	Norway	11
Finland	10	France	48	Iceland	6
Netherlands	8	Turkey	48	Portugal	3

[1] In the same period, the European Payments Union extended net credits for $341 million, and the Bank for International Settlements, for $18 million.

Through these various transactions, Western Europe as a whole received $3.8 billion net of public funds from the United States, and exported net $1.2 billion to underdeveloped countries and $0.4 billion to Eastern Europe, international organizations, and Canada. Only four countries—France, Finland, Switzerland, and Sweden—were net exporters of public funds to the rest of the world, including their European partners. All other European countries, especially Greece, Italy, Germany, and Austria, were net recipients (Table 5).

TABLE 5. NET MOVEMENTS OF PUBLIC LONG-TERM CAPITAL AND GRANTS TO AND FROM WESTERN EUROPEAN COUNTRIES, 1951–52[1]

Net Exporters		Net Importers			
Country	Million U. S. Dollars	Country	Million U. S. Dollars	Country	Million U. S. Dollars
France	207	Greece	517	Netherlands	119
Finland	128	Italy	412	Ireland	86
Switzerland	46	West Germany	317	Norway	51
Sweden	35	Austria	311	Spain	42
EPU	146	Yugoslavia	230	Portugal	31
		United Kingdom	218	Iceland	23
		Turkey	165	Denmark	6
		Belgium-Luxembourg	129	Unallocated	121

Total net amount received by Western Europe....$2,189 million

[1] Net positions of individual countries include transfers between European countries themselves. Individual positions do not contain contributions to, or receipts from, relief and technical assistance organizations; these are included, however, in the total net amount received by Western Europe.

TABLE 6. NET RECEIPTS OF PUBLIC FUNDS BY UNDERDEVELOPED COUNTRIES, 1951–52[1]

(In millions of U.S. dollars)

Paying Countries	Receiving Countries				
	Independent Sterling Area	European Dependencies	Latin America	Other Countries	Total
United States	277	68	132	655	1,132
Canada	25	—	3	−6	22
Western Europe	41	1,216	13	−108	1,162
Other countries (including Japan and underdeveloped countries)	25	−25	−5	34	29
IMF	19	—	−35	7	−9
IBRD	135	18	122	13	288
UN organizations	31	2	5	274	312
Total	554	1,280	236	868	2,938

[1] No sign indicates net inflow; minus sign indicates net outflow. Totals may not equal the sums of the items because of rounding.

MOVEMENTS TO AND FROM UNDERDEVELOPED COUNTRIES

Underdeveloped countries as defined here include the non-European independent sterling area countries, the overseas dependencies of Western European countries, the Latin American Republics, and an "other countries" group consisting of Afghanistan, Egypt, Ethiopia, Indonesia, Iran, Israel, Korea, Lebanon, Liberia, Libya, the Philippines, Saudi Arabia, Sudan, Syria, Taiwan, and Thailand. Taken together, these underdeveloped countries received $3.8 billion from the rest of the world, principally from the United States ($1.4 billion) and Western Europe ($1.5 billion). The remainder consisted mainly of grants by UN agencies ($0.3 billion), loans by the IBRD ($0.3 billion), and drawings on the International Monetary Fund ($0.1 billion).

Grants accounted for the larger part ($2.0 billion) of these total receipts. They were mainly $0.9 billion granted by France to its overseas territories, $0.1 billion by the United Kingdom to its colonies, and $0.2 billion by the United States to various Middle Eastern and Far Eastern countries. U.S. contributions to the Korean Emergency Program and UN Korean Relief Administration accounted for most of the $0.3 billion distributed by UN agencies to underdeveloped countries. The IBRD, the IMF,[4] and the United States were the principal sources of the $1.7 billion of loan funds received by underdeveloped countries,

[4] The term "loan" is technically incorrect in the case of currency sales by the International Monetary Fund.

though the United Kingdom also made loans to its overseas dependencies, and the Netherlands Government made loans to Indonesia.

After allowance for $0.6 billion of repayments made principally by Latin American Republics to the United States, the IMF, and Europe, and also for other small outflows of public funds, underdeveloped countries were net recipients of $2.9 billion of public funds from the rest of the world (Table 6). The United States and Western Europe were the major, and roughly equal, sources of these funds; the European dependencies were the largest single category of recipients of these funds.

Movements to and from international organizations

As a group, international organizations were net recipients of $0.3 billion of public funds (Table 7). The IBRD receipts from the sale of bonds, from newly available capital funds, and from repayments of loans exceeded its total loan disbursements by $40 million; the receipts of the IMF were $0.2 billion larger than the currency sold to members by the Fund; and contributions to relief and technical assistance organizations were $0.1 billion larger than the grants made by them. These transactions represented, for the most part, transfers to underdeveloped countries through the international organizations of funds received from the United States, Western Europe, and Canada.

Most of the IBRD loans went to underdeveloped member countries in the sterling area and in Latin America. The largest borrower was Australia ($80 million); next in importance were Brazil, South Africa, Mexico, Colombia, and India. Loans to Europe amounted to only $51 million and were mainly to Yugoslavia, Belgium, Finland, and Italy. Unlike the experience of the earlier postwar years, the Bank's receipts from Europe during 1951–52, which resulted from sales of bonds on the Swiss and London markets, 18 per cent releases by France, and the initial subscription of Germany, were larger than its disbursements in Europe.

The IMF received $117 million in new gold subscriptions, mainly from Japan, Germany, and Sweden, and $160 million from members' repurchases of their currencies. The Fund made available $120 million to its members during this same period.

The relief and technical assistance organizations redistributed $0.3 billion to underdeveloped countries. Korea was by far the largest beneficiary, receiving $0.2 billion, for the most part through the Korean Emergency Program. Four fifths of the $0.5 billion received by all these organizations was contributed by the United States.

TABLE 7. INTERNATIONAL MOVEMENTS OF PUBLIC LONG-TERM CAPITAL AND GRANTS TO AND FROM INTERNATIONAL ORGANIZATIONS, 1951–52[1]

(In millions of U.S. dollars)

	To	From	Net	To	From	Net	To	From	Net	To	From	Net
	IBRD			IMF			Int. Relief and Tech. Assis. Orgs.			All International Organizations		
United States	267	—	+267	92	84	+7	369	—	+369	728	84	+644
Canada	29	—	+29	—	—	—	12	—	+12	41	—	+41
Western Europe	77	51	+26	129	15	+114	43	8	+35	249	74	+175
Independent sterling area	11	146	−135	11	30	−19	8	39	−31	30	215	−185
Dependent territories	—	18	−18	—	—	—	—	2	−2	—	20	−20
Latin America	1	123	−122	101	66	+35	5	10	−5	107	199	−92
Eastern Europe	—	—	—	—	—	—	—	1	−1	—	1	−1
All other countries	9	17	−8	64	9	+55	12	286	−274	85	312	−227
Unallocated	—	—	—	—	—	—	1	5	−4	1	5	−4
Total	395	355	+40	396	204	+192	450	351	+99	1,241	910	+331

[1] Transactions between various international relief and technical assistance organizations are not included in this table. Local currency subscriptions to the IBRD have been included only when released; local currency subscriptions to the IMF, only when utilized. Transactions that involve these local currency subscriptions appear twice: (1) as a transaction between the country whose currency is used and the IBRD or the IMF, and (2) as a transaction between the IBRD or the IMF and the borrower. Totals may not equal the sums of the items because of rounding.

Statistical Appendix

Table

8 International Movements of Public Long-Term Capital and Grants, 1951
9 International Movements of Public Long-Term Capital and Grants, 1952
10 Net Public Long-Term Capital and Grants Received by Western European Countries, 1951–52
11 Net Repayments of Public Long-Term Capital Received by Western European Countries, 1951–52
12 Summary of Intra-European Movements of Public Long-Term Capital and Grants, 1951–52
13 Contributions Received and Grants Made by International Relief and Technical Assistance Organizations, 1951–52
14 Intra-European Movements of Public Long-Term Capital and Grants, 1951–52

TABLE 8. INTERNATIONAL MOVEMENTS OF

(In millions of

	United States			Canada			Western Europe			Independent Sterling Area			European Dependencies			Latin America		
	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net
United States																		
Loans				394	14	380	116	—	116	129	—	129	17	—	17	149	—	149
Repayments				15	318	−303	31	273	−242	—	6	−6	—	—	—	—	88	−88
Grants				—	—	—	2,396	107	2,289	10	—	10	14	—	14	14	—	14
Total				*409*	*332*	*77*	*2,543*	*380*	*2,164*	*139*	*6*	*133*	*31*	*1*	*30*	*163*	*88*	*75*
Canada																		
Loans	14	394	−380				—	—	—							3	—	3
Repayments	318	15	303				15	63	−47							—	—	—
Grants	—	—	—				—	—	—							—	—	—
Total	*332*	*409*	*−77*				*15*	*63*	*−47*							*3*	—	*3*
Western Europe																		
Loans	—	116	−116	—	—	—	159	159	—	14	—	14	94	—	94	20	3	17
Repayments	273	31	242	63	15	47	453	453	—	22	38	−16	15	8	7	43	58	−15
Grants	107	2,396	−2,289	—	—	—	321	321	—	8	—	8	408	—	408	—	—	—
Total	*380*	*2,543*	*−2,164*	*63*	*15*	*47*	*933*	*933*	—	*44*	*38*	*6*	*516*	*8*	*508*	*63*	*61*	*1*
Independent Sterling Area																		
Loans	—	129	−129				—	14	−14	—	—	—	1	22	−21			
Repayments	6	—	6				38	22	16	9	9	—	—	1	−1			
Grants	—	10	−10				—	8	−8	—	—	—	—	—	—			
Total	*6*	*139*	*−133*				*38*	*44*	*−6*	*9*	*9*	—	*1*	*23*	*−22*			
European Dependencies																		
Loans	—	17	−17				—	94	−94	22	1	21						
Repayments	—	—	—				8	15	−7	1	—	1						
Grants	—	14	−14				—	408	−408	—	—	—						
Total	*1*	*31*	*−30*				*8*	*516*	*−508*	*23*	*1*	*22*						
Latin America																		
Loans	—	149	−149	—	3	−3	3	20	−17							6	6	—
Repayments	88	—	88	—	—	—	58	43	15							10	10	—
Grants	—	14	−14	—	—	—	—	—	—							—	—	—
Total	*88*	*163*	*−75*	—	*3*	*−3*	*61*	*63*	*−2*							*15*	*15*	—
Eastern Europe																		
Loans	—	—	—	—	—	—	—	29	−29									
Repayments	2	—	2	3	—	3	3	2	1									
Grants	—	—	—	—	—	—	—	53	−53									
Total	*2*	—	*2*	*3*	—	*3*	*3*	*84*	*−81*									
All Other Countries																		
Loans	—	112	−112	—	—	—	84	39	46									
Repayments	23	—	23	3	—	3	27	—	27									
Grants	2	478	−476	—	—	—	—	3	−3									
Total	*25*	*589*	*−565*	*3*	—	*3*	*111*	*42*	*69*									
IBRD																		
Loans	—	151	−151	—	10	−10	8	30	−22	58	—	58				57	—	57
Repayments	—	—	—	—	—	—	—	3	−3	—	2	−2				—	—	—
Grants	—	—	—	—	—	—	—	—	—	—	—	—				—	—	—
Total	—	*151*	*−151*	—	*10*	*−10*	*8*	*32*	*−24*	*58*	*2*	*56*				*57*	—	*57*
IMF																		
Loans	—	7	−7				—	46	−46	—	—	—				28	—	28
Repayments	31	—	31				—	10	−10	—	10	−10				—	26	−26
Grants	—	—	—				—	—	—	—	—	—				—	—	—
Total	*31*	*7*	*24*				—	*55*	*−55*	—	*10*	*−10*				*28*	*26*	*1*
Int. Relief and Tech. Assis. Orgs.																		
Loans	—	13	−13	—	—	—	—	—	—	—	—	—				—	—	—
Repayments	1	—	1	—	—	—	—	—	—	—	—	—				—	—	—
Grants	—	121	−121	—	10	−10	5	19	−14	18	4	14				3	3	—
Total	*1*	*134*	*133*	—	*10*	*−10*	*5*	*19*	*−14*	*18*	*4*	*14*				*3*	*3*	—
Unallocated																		
Loans	—	—	—	—	5	−5	—	3	−3							—	—	—
Repayments	—	—	—	—	1	−1	4	2	2							—	6	−6
Grants	—	54	−54	—	—	—	—	2	−1							—	—	—
Total	—	*54*	*−54*	*5*	*1*	*4*	*4*	*6*	*−2*							—	*6*	*−6*
Totals																		
Loans	14	1,087	−1,073	399	27	372	371	432	−62	223	1	222	111	22	89	263	9	254
Repayments	741	46	696	84	334	−250	637	883	246	31	65	−34	15	9	6	52	187	−135
Grants	110	3,087	−2,978	—	10	−10	2,723	921	1,802	36	4	32	423	1	422	17	3	14
Grand total	*865*	*4,220*	*−3,355*	*483*	*371*	*112*	*3,731*	*2,256*	*1,495*	*290*	*70*	*220*	*548*	*32*	*517*	*331*	*199*	*133*

[1] Totals may not equal the sums of the items because of rounding.

Public Long-Term Capital and Grants, 1951[1]

U. S. dollars)

To Eastern Europe	From Eastern Europe	Net Eastern Europe	To All Other Countries	From All Other Countries	Net All Other Countries	To IBRD	From IBRD	Net IBRD	To IMF	From IMF	Net IMF	To Int. Relief and Tech. Assis. Orgs.	From Int. Relief and Tech. Assis. Orgs.	Net Int. Relief and Tech. Assis. Orgs.	To Unallocated	From Unallocated	Net Unallocated	To Totals	From Totals	Net Totals
—	—	—	112	—	112	151	—	151	7	—	7	13	—	13	—	—	—	1,087	14	1,073
—	2	−2	—	23	−23	—	—	—	—	31	−31	—	1	−1	—	—	—	46	741	−696
—	—	—	478	2	475	—	—	—	—	—	—	121	—	121	54	—	54	3,087	110	2,978
—	*2*	*−2*	*589*	*25*	*565*	*151*	*—*	*151*	*7*	*31*	*−24*	*134*	*1*	*133*	*54*	*—*	*54*	*4,220*	*865*	*3,355*
—	—	—	—	—	—	10	—	10				—	—	—	—	5	−5	27	399	−372
—	3	−3	—	3	−3	—	—	—				—	—	—	1	—	1	334	84	250
—	—	—	—	—	—	—	—	—				10	—	10	—	—	—	10	—	10
—	3	−3	—	3	−3	10	—	10				10	—	10	1	5	−4	371	483	−112
29	—	29	39	84	−46	30	8	22	46	—	46	—	—	—	3	—	3	432	371	62
2	3	−2	—	27	−27	3	—	3	10	—	10	—	—	—	2	4	−2	883	637	246
53	—	53	3	—	3	—	—	—	—	—	—	19	5	14	2	—	1	921	2,723	−1,802
84	*3*	*81*	*42*	*111*	*−69*	*32*	*8*	*24*	*55*	*—*	*55*	*19*	*5*	*14*	*6*	*4*	*2*	*2,236*	*3,731*	*−1,495*
						—	58	−58	—	—	—	—	—	—				1	223	−222
						2	—	2	10	—	10	—	—	—				65	31	34
						—	—	—	—	—	—	4	18	−14				4	36	−32
						2	*58*	*−56*	*10*	*—*	*10*	*4*	*18*	*−14*				*70*	*290*	*−220*
																		22	111	−89
																		9	15	−6
																		1	423	−422
																		32	*548*	*−517*
						—	57	−57	—	28	−28	—	—	—	—	—	—	9	263	−254
						—	—	—	26	—	26	—	—	—	6	—	6	187	52	135
						—	—	—	—	—	—	3	3	—	—	—	—	3	17	−14
						—	*57*	*−57*	*26*	*28*	*−2*	*3*	*3*	*—*	*6*	*—*	*6*	*199*	*331*	*−133*
																		—	29	−29
																		8	2	6
																		—	53	−53
																		8	*84*	*−76*
			4	4	—	—	6	−6	—	7	−7	—	—	—	34	—	34	122	167	−45
			—	—	—	—	—	—	1	—	1	—	—	—	—	10	−10	55	10	44
			—	—	—	—	—	—	—	—	—	9	95	−86	—	—	—	11	577	−565
			4	*4*	*—*	*—*	*6*	*−6*	*1*	*7*	*−5*	*9*	*95*	*−86*	*34*	*10*	*24*	*188*	*753*	*−566*
			6	—	6													129	191	−62
			—	—	—													—	4	−4
			—	—	—													—	—	—
			6	—	6													*129*	*195*	*−66*
			7	—	7													35	52	−18
			—	1	−1													31	47	−16
			—	—	—													—	—	—
			7	1	5													*66*	*99*	*−34*
			—	—	—										—	—	—	—	13	−13
			—	—	—										—	—	—	1	—	1
			95	9	86										3	1	2	124	166	−42
			95	*9*	*86*										*3*	*1*	*2*	*125*	*180*	*−54*
			—	34	−34							—	—	—				5	36	−31
			10	—	10							—	—	—				14	9	5
			—	—	—							1	3	−2				1	59	−58
			10	*34*	*−24*							*1*	*3*	*−2*				*20*	*104*	*−84*
29	—	29	167	122	45	191	129	62	52	35	18	13	—	13	36	5	31	1,868	1,868	
2	8	−6	10	55	−44	4	—	4	47	31	16	—	1	−1	9	14	−5	1,632	1,632	
53	—	53	577	11	565	—	—	—	—	—	—	166	124	42	59	1	58	4,163	4,163	
84	*8*	*76*	*753*	*188*	*566*	*195*	*129*	*66*	*99*	*66*	*34*	*180*	*125*	*54*	*104*	*20*	*84*	*7,663*	*7,663*	

TABLE 9. INTERNATIONAL MOVEMENTS O

(*In millions*

	United States			Canada			Western Europe			Independent Sterling Area			European Dependencies			Latin America		
	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net
United States																		
Loans				180	7	174	504	—	504	131	—	131	17	—	17	131	—	131
Repayments				2	260	−258	18	362	−343	—	5	−5	—	—	—	—	92	−92
Grants				—	—	—	1,532	85	1,447	18	—	18	22	1	22	19	—	19
Total				*183*	*267*	*−84*	*2,054*	*446*	*1,608*	*149*	*5*	*144*	*39*	*1*	*38*	*150*	*92*	*58*
Canada																		
Loans	7	180	−174				9	9	—	—	—	—						
Repayments	260	2	258				12	60	−48	—	—	—						
Grants	—	—	—				1	—	1	25	—	25						
Total	*267*	*183*	*84*				*22*	*69*	*−47*	*25*	—	*25*						
Western Europe																		
Loans	—	504	−504	9	9	—	128	128	—	79	—	79	101	2	99	28	—	28
Repayments	362	18	343	60	12	48	342	342	—	23	73	−50	2	—	2	8	24	−16
Grants	85	1,532	−1,447	—	1	−1	137	137	—	8	—	8	607	—	607	—	—	—
Total	*446*	*2,054*	*−1,608*	*69*	*22*	*47*	*608*	*608*	—	*110*	*73*	*37*	*710*	*2*	*708*	*36*	*24*	*12*
Independent Sterling Area																		
Loans	—	131	−131	—	—	—	—	79	−79	—	—	—	1	4	−3			
Repayments	5	—	5	—	—	—	73	23	50	7	7	—	—	—	—			
Grants	—	18	−18	—	25	−25	—	8	−8	13	13	—	—	—	—			
Total	*5*	*149*	*−144*	—	*25*	*−25*	*73*	*110*	*37*	*19*	*19*	—	*1*	*4*	*−3*			
European Dependencies																		
Loans	—	17	−17				2	101	−99	4	1	3						
Repayments	—	—	—				—	2	−2	—	—	—						
Grants	1	22	−22				2	607	−607	—	—	—						
Total	*1*	*39*	*−38*				*2*	*710*	*−708*	*4*	*1*	*3*						
Latin America																		
Loans	—	131	−131				—	28	−28							2	2	—
Repayments	92	—	92				24	8	16							9	9	—
Grants	—	19	−19				—	—	—							—	—	—
Total	*92*	*150*	*−58*				*24*	*36*	*−11*							*11*	*11*	—
Eastern Europe																		
Loans	—	—	—				—	33	−33									
Repayments	4	—	4				2	1	1									
Grants	—	—	—				—	36	−36									
Total	*4*	—	*4*				*2*	*70*	*68*									
All Other Countries																		
Loans	—	158	−158	—	—	—	42	17	25							3	—	3
Repayments	25	—	25	3	—	3	13	—	13							—	—	—
Grants	6	245	−239	—	—	—	—	—	—							—	—	—
Total	*31*	*402*	*−371*	*3*	—	*3*	*55*	*17*	*38*							*3*	—	*3*
IBRD																		
Loans	—	116	−116	—	19	−19	43	45	−2	88	7	81	18	—	18	66	—	66
Repayments	—	—	—	—	—	—	—	—	—	—	2	−2	—	—	—	—	1	−1
Grants	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	*116*	*−116*	—	*19*	*−19*	*43*	*45*	*−2*	*88*	*9*	*79*	*18*	—	*18*	*66*	*1*	*65*
IMF																		
Loans	—	85	−85				15	33	−18	30	1	29				38	3	35
Repayments	53	—	53				—	40	−40	—	—	—				—	72	−72
Grants	—	—	—				—	—	—	—	—	—				—	—	—
Total	*53*	*85*	*−32*				*15*	*73*	*−59*	*30*	*1*	*29*				*38*	*75*	*−37*
Int. Relief and Tech. Assis. Orgs.																		
Loans	—	7	−7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Repayments	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Grants	—	248	−248	—	2	−2	3	24	−20	22	4	18	2	—	2	7	2	5
Total	*1*	*256*	*−255*	—	*2*	*−2*	*3*	*24*	*−20*	*22*	*4*	*18*	*2*	—	*2*	*7*	*2*	*5*
Unallocated																		
Loans	—	—	—	2	—	2										—	—	—
Repayments	—	—	—	1	1	−1										—	2	−2
Grants	—	12	−12	—	—	—										—	—	—
Total	—	*12*	*−12*	*3*	*1*	*2*										—	*2*	*−2*
Totals																		
Loans	7	1,329	−1,322	192	35	156	743	472	271	331	9	322	136	6	130	267	5	262
Repayments	802	21	782	66	273	−207	486	839	−353	30	87	−57	2	—	2	17	200	−183
Grants	91	2,096	−2,005	—	28	−28	1,673	896	776	86	17	69	632	1	631	26	2	24
Grand total	*900*	*3,446*	*−2,545*	*258*	*336*	*−78*	*2,902*	*2,208*	*694*	*447*	*112*	*335*	*770*	*7*	*763*	*310*	*207*	*103*

[1] Totals may not equal the sums of the items because of rounding.

PUBLIC LONG-TERM CAPITAL AND GRANTS, 1952[1]

(In U. S. dollars)

Eastern Europe		All Other Countries			IBRD			IMF			Int. Relief and Tech. Assis. Orgs.			Unallocated			Totals		
From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net
—	—	158	—	158	116	—	116	85	—	85	7	—	7	—	—	—	1,329	7	1,322
4	−4	—	25	−25	—	—	—	—	53	−53	—	1	−1	—	—	—	21	802	−782
—	—	245	6	239	—	—	—	—	—	—	248	—	248	12	—	12	2,096	91	2,005
4	*−4*	*408*	*31*	*371*	*116*	—	*116*	*85*	*53*	*32*	*256*	*1*	*255*	*12*	—	*12*	*3,446*	*900*	*2,545*
		—	—	—	19	—	19				—	—	—	—	2	−2	35	192	−156
		—	—	—	—	—	—				—	—	—	1	1	—	273	66	207
		—	3	−3	—	—	—				2	—	2	—	—	—	28	—	28
		—	—	—	—	—	—				—	—	—	1	3	−2	330	258	78
		—	*3*	*−3*	*19*	—	*19*				*2*	—	*2*						
		17	42	−25	45	43	2	33	15	18	—	—	—				472	743	−271
—	33	—	13	−13	—	—	—	40	—	40	—	—	—				839	486	353
2	−1	—	—	—	—	—	—	—	—	—	24	3	20				896	1,673	−776
—	36	—	—	—	—	—	—	—	—	—	*24*	*3*	*20*				*2,208*	*2,902*	*−694*
2	*68*	*17*	*55*	*−38*	*45*	*43*	*2*	*73*	*15*	*59*									
					7	88	−81	1	30	−29	—	—	—				9	331	−322
					2	—	2	—	—	—	—	—	—				87	30	57
					—	—	—	—	—	—	4	22	−18				17	86	−69
					9	*88*	*−79*	*1*	*30*	*−29*	*4*	*22*	*−18*				*112*	*447*	*−335*
					—	18	−18				—	—	—				6	136	−130
					—	—	—				—	—	—				—	2	−2
					—	—	—				—	2	−2				1	632	−631
					—	*18*	*−18*				—	*2*	*−2*				7	*770*	*−763*
		—	3	−3	—	66	−66	3	38	−35	—	—	—	—	—	—	5	267	−262
		—	—	—	1	—	1	72	—	72	—	—	—	2	—	2	200	17	183
		—	—	—	—	—	—	—	—	—	2	7	−5	—	—	—	2	26	−24
		—	*3*	*−3*	*1*	*66*	*−65*	*75*	*38*	*37*	*2*	*7*	*−5*	*2*	—	*2*	*207*	*310*	*−103*
																	—	33	−33
																	7	1	5
																	—	36	−36
																	7	*70*	*−63*
		60	60	—	9	12	−2	62	2	60	—	—	—	14	—	14	190	248	−58
		3	3	—	—	—	—	—	—	—	—	—	—	—	10	−10	45	13	32
		—	—	—	—	—	—	—	—	—	3	190	−187	—	—	—	9	435	−426
		63	*63*	—	*9*	*12*	*−2*	*63*	*2*	*61*	*3*	*190*	*−187*	*14*	*10*	*4*	*243*	*696*	*−452*
		12	9	2													226	197	29
		—	—	—													—	3	−3
		—	—	—													—	—	—
		12	*9*	*2*													*226*	*200*	*26*
		2	62	−60													85	184	−99
		—	—	—													53	113	−60
		—	—	—													—	—	—
		2	*62*	*−61*													*138*	*297*	*−159*
		—	—	—										—	—	—	—	7	−7
		—	—	—										—	—	—	1	—	1
		190	3	187										2	—	2	226	283	−57
		190	*3*	*187*										*2*	—	*2*	*227*	*291*	*−63*
		—	14	−14							—	—	—				2	14	−12
		10	—	10							—	—	—				11	3	8
		—	—	—							—	2	−2				—	14	−14
		10	*14*	*−4*							—	*2*	*−2*				*13*	*31*	*−18*
—	—	33	248	190	58	197	226	−29	184	85	99	7	—	7	14	2	12	2,359	2,359
7	−5	13	45	−32	3	—	3	113	53	—	60	—	1	−1	3	11	−8	1,536	1,536
—	—	36	435	9	426	—	—	—	—	—	—	283	226	57	14	—	14	3,276	3,276
7	*63*	*698*	*243*	*452*	*200*	*226*	*−26*	*297*	*138*	*159*	*291*	*227*	*63*	*31*	*13*	*18*	*7,171*	*7,171*	

TABLE 10. NET PUBLIC LONG-TERM CAPITAL AND GRANTS RECEIVED BY WESTERN EUROPEAN COUNTRIES, 1951–52[1]

(In millions of U.S. dollars)

	Western Europe	United States and Canada	Underdeveloped Countries[2]	IMF and IBRD	Others and Unallocated	Total
Austria	81	230	—	—	—	311
Belgium-Luxembourg	30	96	−3	7	—	129
Denmark	−46	52	—	−1	—	6
Finland	−10	−7	−37	14	−89	−128
France	48	687	−935	−8	—	−207
West Germany	−111	468	—	−40	—	317
Greece	206	311	—	—	—	517
Iceland	6	14	—	2	—	23
Ireland	62	24	—	—	—	86
Italy	−25	434	−2	4	—	412
Netherlands	−8	200	−49	−24	—	119
Norway	11	51	—	−10	—	51
Portugal	3	28	—	—	—	31
Spain	—	42	—	—	—	42
Sweden	24	23	3	−27	−57	−35
Switzerland	19	—	−29	−35	—	−46
Turkey	48	110	—	9	−3	165
United Kingdom	−60	431	−110	−44	—	218
Yugoslavia	83	145	−8	10	—	230
EPU	−341	195	—	—	—	−146
Unallocated	−21	144	−2	—	−34[3]	121
Total	—	3,677	−1,162	−141	−184	2,189

[1] No sign indicates net receipt of public funds; minus sign indicates net export of public funds. Totals may not equal the sums of the items because of rounding.

[2] Dependent territories, independent sterling area countries, Latin American Republics, and countries in the Far East (except Japan), the Near East, and Africa.

[3] Net contribution to United Nations Relief and Technical Assistance Organizations.

TABLE 11. NET REPAYMENTS OF PUBLIC LONG-TERM CAPITAL RECEIVED BY WESTERN EUROPEAN COUNTRIES, 1951–52[1]

(In millions of U.S. dollars)

	Western Europe	United States and Canada	Under-developed Countries	IMF and IBRD	Others	Total
Austria	—	−9	—	—	—	−9
Belgium-Luxembourg	39	−22	4	—	—	21
Denmark	−46	−16	—	—	—	−62
Finland	−13	−7	−40	1	—	−60
France	−18	−213	5	—	1	−225
West Germany	−100	−48	—	—	—	−149
Greece	−6	−11	—	—	—	−17
Iceland	−1	—	—	—	—	−1
Ireland	62	—	—	—	—	62
Italy	69	−56	−1	—	—	12
Netherlands	−7	−44	18	−27	—	−61
Norway	−17	−27	—	−10	2	−52
Portugal	3	—	—	—	—	3
Sweden	35	−1	4	−8	5	36
Switzerland	94	—	—	2	—	95
Turkey	−26	−13	—	−5	−3	−47
United Kingdom	−32	−216	136	—	—	−113
Yugoslavia	−44	−1	−7	−1	—	−53
Unallocated	6	4	2	—	—	12
Total	—	−681	131	−53	5	−599

[1] No sign indicates net repayment received; minus sign indicates net repayment made. Totals may not equal the sums of the items because of rounding.

TABLE 12. SUMMARY OF INTRA-EUROPEAN MOVEMENTS OF PUBLIC LONG-TERM CAPITAL AND GRANTS, 1951–52

(In millions of U.S. dollars)

	Loans, Repayments, and Grants		
	Received from Other Western European Countries	Made to Other Western European Countries	Net [1]
West Germany	29	139	−111
United Kingdom	188	249	−60
Denmark	8	54	−46
Italy	81	105	−25
Finland	3	13	−10
Netherlands	94	102	−8
Portugal	3	—	3
Iceland	8	2	6
Norway	48	37	11
Switzerland	94	76	19
Sweden	56	33	24
Belgium-Luxembourg	125	95	30
Turkey	75	26	48
France	202	153	48
Ireland	62	—	62
Austria	91	9	81
Yugoslavia	127	44	83
Greece	212	6	206
EPU	29	370	−341
BIS	3	21	−18
Unallocated	4	8	−3
Total	1,541	1,541	—

[1] No sign indicates net receipt of public funds; minus sign indicates net export of public funds. Totals may not equal the sums of the items because of rounding.

TABLE 13. CONTRIBUTIONS RECEIVED AND GRANTS MADE BY INTERNATIONAL RELIEF AND TECHNICAL ASSISTANCE ORGANIZATIONS, 1951–52[1]

(In millions of U.S. dollars)

	Contributions Received By[2]							Grants Made By[2]						
	UNICEF	UNKRA	KEP	UNRWA	TAB	WHO[3]	Total	UNICEF	UNKRA	KEP	UNRWA	TAB	WHO[3]	Total
United States	12.4	65.8	204.9	56.2	23.4	6.5	369.3	—	—	—	—	—	—	—
Canada	1.0	6.9	—	1.7	1.5	0.5	11.5	—	—	—	—	—	—	—
Western Europe	2.3	5.8	1.1	19.6	9.1	4.7	42.7	4.8	—	—	—	2.1	1.2	8.1
Independent sterling area	2.1	0.7	1.2	1.1	1.7	1.3	8.1	6.9	—	—	26.9	4.7	0.8	39.4
Dependent territories	—	—	—	—	—	0.1	0.2	0.9	—	—	—	1.4	0.2	2.5
Latin America	0.6	0.5	1.1	—	2.2	0.8	5.2	3.0	—	—	—	6.0	0.8	9.9
Eastern Europe	—	—	—	—	—	—	—	0.9	—	—	—	—	—	0.9
All other countries	1.3	0.3	7.3	1.6	0.9	0.5	11.8	6.3	30.8	215.7	22.6	8.5	1.6	285.5
Unallocated	—	—	—	0.9	—	—	—	3.4	—	—	—	0.6	0.7	4.7
Total	19.7	80.0	215.7	81.1	38.8	14.3	449.6	26.2	30.8	215.7	49.5	23.3	5.5	351.0

[1] Items not included here are grants to and from the International Refugee Organization, not clearly allocable by country, the U.S. loan for the UN building, and transfers between organizations. Totals may not equal the sums of the items because of rounding.

[2] UNICEF, United Nations International Children's Emergency Fund; UNKRA, United Nations Korean Relief Administration; KEP, Korean Emergency Program; UNRWA, United Nations Relief and Works Agency for Palestine Refugees in the Near East; TAB, Technical Assistance Board; WHO, World Health Organization.

[3] Technical assistance.

	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From
	Austria			BLEU			Denmark			France			West Germany			Greece			Italy			Neth.	
Austria																							
Loans													—	—	—								
Repayments													3	—	3								
Grants													—	—	—								
Total													*3*	—	*3*								
BLEU																							
Loans							—	—	—	—	—	—											
Repayments							—	3	−3	—	18	−18											
Grants							—	—	—	—	—	—											
Total							—	*3*	*−3*	—	*18*	*−18*											
Denmark																							
Loans										—	—	—											
Repayments				3	—	3				7	—	7											
Grants				—	—	—				—	—	—											
Total				*3*	—	*3*				7	—	7											
France																							
Loans				—	—	—	—	—	—				—	—	—				—	—	—		
Repayments				18	—	18	—	7	−7				—	32	−32				8	—	8	3	
Grants				—	—	—	—	—	—				—	—	—				—	9	−9	—	
Total				*18*	—	*18*	—	7	*−7*				—	*32*	*−32*				*8*	*9*	*−1*	3	
West Germany																							
Loans	—	—	—							—	—	—											
Repayments	—	3	−3							32	—	32										72	—
Grants	—	—	—							—	—	—										—	—
Total	—	*3*	*−3*							*32*	—	*32*										72	—
Greece																							
Loans																—	—	—					
Repayments																—	—	—					
Grants																—	—	—	55	—	55		
Total																—	—	—	*55*	—	*55*		
Italy																							
Loans										—	—	—											
Repayments										—	8	−8				—	—	—					
Grants										9	—	9				55	—	55					
Total										*9*	*8*	*1*				*55*	—	*55*					
Netherlands																							
Loans				—	—	—	—	—	—	—	—	—	—	—	—				—	—	—		
Repayments				39	—	39	—	3	−3	9	3	6	—	72	−72				1	—	1		
Grants				—	—	—	—	—	—	—	—	—	—	—	—				—	—	—		
Total				*39*	—	*39*	—	*3*	*−3*	*9*	*3*	*6*	—	*72*	*−72*				*1*	—	*1*		
Norway																							
Loans	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				—	—	—		
Repayments	—	1	−1	3	—	3	6	—	6	4	—	4	1	—	1							3	
Grants	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				—	—	—	—	
Total	—	*1*	*−1*	*3*	—	*3*	*6*	—	*6*	*4*	—	*4*	*1*	—	*1*							*3*	
Sweden																							
Loans				—	—	—	—	—	—	—	—	—	—	—	—				—	—	—		
Repayments				3	—	3	—	3	−3	5	5	−1	—	15	−15				2	—	2	11	
Grants				—	—	—	—	—	—	—	—	—	2	—	2				—	—	—	—	
Total				*3*	—	*3*	—	*3*	*−3*	*5*	*5*	*−1*	*2*	*15*	*−13*				*2*	—	*2*	11	
Switzerland																							
Loans				46	—	46	—	—	—	29	—	29							—	—	—		
Repayments				—	35	−35	—	6	−6	—	33	−33							—	11	−11	5	
Grants				—	—	—	—	—	—	—	—	—							—	—	—	—	
Total				*46*	*35*	*11*	—	*6*	*−6*	*29*	*33*	*−4*							—	*11*	*−11*	5	
Turkey																							
Loans	—	—	—				—	—	—	—	—	—	—	—	—								
Repayments	3	—	3				1	—	1	2	—	2	12	—	12							1	
Grants	—	—	—				—	—	—	—	—	—	—	—	—							—	
Total	*3*	—	*3*				*1*	—	*1*	*2*	—	*2*	*12*	—	*12*							*1*	
United Kingdom																							
Loans				—	25	−25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Repayments				—	3	−3	—	29	−29	55	65	−10	—	—	—	—	6	−6	54	1	53	8	34
Grants				—	—	—	—	—	—	—	—	—	8	—	8	—	—	—	—	—	—	—	
Total				—	*28*	*−28*	—	*29*	*−29*	*55*	*65*	*−10*	*8*	—	*8*	—	*6*	*−6*	*54*	*1*	*53*	*8*	34
EPU																							
Loans	—	—	—	—	—	—				25	—	25				—	—	—					
Repayments	—	—	—	—	—	—				—	—	—				—	—	—					
Grants	88	—	88	—	8	−8				—	—	—				157	—	157					
Total	*88*	—	*88*	—	*8*	*−8*				*25*	—	*25*				*157*	—	*157*					
Other W. Europe[2]																							
Loans	—	6	−6	—	23	−23	—	—	—	20	3	17	—	20	−20				—	—	—	—	
Repayments	—	—	—	12	1	11	1	1	—	4	3	1	3	—	3				16	—	16	3	
Grants	—	—	—	—	—	—	—	—	—	—	14	−14	—	—	—				—	30	−30	—	
Total	—	*6*	*−6*	*12*	*24*	*−12*	*1*	*1*	—	*24*	*20*	*3*	*3*	*20*	*−17*				*16*	*30*	*−14*	*3*	
Totals																							
Loans	—	6	−6	46	48	−2	—	—	—	74	3	71	—	20	−20	—	—	—	—	—	—	—	
Repayments	3	3	—	78	39	39	8	54	−46	118	136	−18	19	119	−100	—	6	−6	81	11	69	94	101
Grants	88	—	88	—	8	−8	—	—	—	9	14	−5	10	—	10	212	—	212	—	94	−94	—	
Grand total	*91*	*9*	*81*	*125*	*95*	*30*	*8*	*54*	*−46*	*202*	*153*	*48*	*29*	*139*	*−111*	*212*	*6*	*206*	*81*	*105*	*−25*	94	101

[1] Totals may not equal the sums of the items because of rounding.
[2] Finland, Iceland, Ireland, Portugal, Yugoslavia, and unallocated.

LIC LONG-TERM CAPITAL AND GRANTS, 1951–52[1]

S. dollars)

Norway		Sweden			Switzerland			Turkey			United Kingdom			EPU			Other W. Europe[2]			Totals		
From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net	To	From	Net
—	—							—	—	—				—	—	—	6	—	6	6	—	6
—	1							—	3	−3				—	—	—	—	—	—	3	3	—
—	1							—	3	−3				—	88	−88	—	—	—	—	88	−88
—	*1*							—	*3*	*−3*				—	*88*	*−88*	*6*	—	*6*	*9*	*91*	*−81*
—	—	—	—	—	—	46	−46				25	—	25	—	—	—	23	—	23	48	46	2
3	−3	—	3	−3	35	—	35				3	—	3	—	—	—	1	12	−11	39	78	−39
—	—	—	—	—	—	—	—				—	—	—	8	—	8	—	—	—	8	—	8
3	*−3*	—	*3*	*−3*	*35*	*46*	*−11*				*28*	—	*28*	*8*	—	*8*	*24*	*12*	*12*	*95*	*125*	*−30*
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	−6	3	—	3	6	—	6	—	1	−1	29	—	29				1	1	—	54	8	46
—	—	—	—	—	—	—	—	—	—	—	—	—	—				—	—	—	—	—	—
6	*−6*	*3*	—	*3*	*6*	—	*6*	—	*1*	*−1*	*29*	—	*29*				*1*	*1*	—	*54*	*8*	*46*
—	—	—	—	—	—	29	−29	—	—	—	—	—	—	—	25	−25	3	20	−17	3	74	−71
4	−4	5	5	1	33	—	33	—	2	−2	65	55	10	—	—	—	3	4	−1	136	118	18
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14	—	14	14	9	5
4	*−4*	*5*	*5*	*1*	*33*	*29*	*4*	—	*2*	*−2*	*65*	*55*	*10*	—	*25*	*−25*	*20*	*24*	*−5*	*153*	*202*	*−48*
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20	—	20	20	—	20
1	−1	15	—	15				—	12	−12	—	—	—				—	3	−3	119	19	100
—	—	—	2	−2				—	—	—	—	8	−8				—	—	—	—	10	−10
1	*−1*	*15*	*2*	*13*				—	*12*	*−12*	—	*8*	*−8*				*20*	*3*	*17*	*139*	*29*	*111*
											—	—	—	—	—	—				—	—	—
											6	—	6	—	—	—				6	—	6
											—	—	—	—	157	−157				—	212	−212
											6	—	*6*	—	*157*	*−157*				*6*	*212*	*−206*
		—	—	—	—	—	—				—	—	—				—	—	—	—	—	—
		—	2	−2	11	—	11				1	54	−53				—	16	−16	11	81	−69
		—	—	—	—	—	—				—	—	—				30	—	30	94	—	94
		—	*2*	*−2*	*11*	—	*11*				*1*	*54*	*−53*				*30*	*16*	*−14*	*105*	*81*	*25*
—	—	—	—	—	—	—	—	—	—	—	—	—	—				1	—	1	1	—	1
3	−3	11	—	11	5	—	5	—	1	−1	34	8	26				1	3	−2	101	94	7
—	—	—	—	—	—	—	—	—	—	—	—	—	—				—	—	—	—	—	—
3	*−3*	*11*	—	*11*	*5*	—	*5*	—	*1*	*−1*	*34*	*8*	*26*				*2*	*3*	*−1*	*102*	*94*	*8*
—	—	—	—	—	—	—	—				—	14	−14	—	9	−9	1	7	−6	1	30	−29
		4	—	4	2	—	2				11	16	−5	—	—	—	2	2	—	36	18	17
		—	—	—	—	—	—				—	—	—	—	—	—	—	—	—	—	—	—
		4	—	*4*	*2*	—	*2*				*11*	*30*	*−19*	—	*9*	*−9*	*3*	*8*	*−6*	*37*	*48*	*−11*
—	—							—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	−4							1	—	1				—	—	—	—	6	−6	10	45	−35
—	—							—	—	—				21	11	10	—	—	—	23	12	12
4	*−4*							*1*	—	*1*				*21*	*11*	*10*	—	*6*	*−6*	*33*	*56*	*−23*
—	—																—	—	—	75	—	75
2	−2																—	2	−2	—	94	−94
—	—																—	—	—	—	—	—
2	*−2*																—	*2*	*−2*	*76*	*94*	*−19*
—	—	—	—	—							—	1	−1	—	25	−25				—	26	−26
—	—	—	1	−1							7	—	7	—	—	—				26	1	26
—	—	—	—	—							—	—	—	—	48	−48				—	48	−48
—	*1*	—	*1*	*−1*							*7*	*1*	*6*	—	*73*	*−73*				*26*	*75*	*−48*
—	14							1	—	1							30	—	30	45	25	20
11	5							—	7	−7							62	8	54	196	163	32
—	—							—	—	—							—	—	—	8	—	8
11	*19*							*1*	*7*	*−6*							*92*	*8*	*84*	*249*	*188*	*60*
—	9	—	—	—				25	—	25							—	—	—	59	—	59
—	—	—	—	—				—	—	—							—	—	—	—	—	—
—	9	11	21	−10				48	—	48							8	—	8	311	29	282
—	*9*	*11*	*21*	*−10*				*73*	—	*73*							*8*	—	*8*	*370*	*29*	*341*
1	6	—	—	—	—	—	—				—	30	−30	—	—	—	1	1	—	28	86	−58
2	—	6	—	6	2	—	2				8	62	−54	—	—	—	3	3	—	59	73	−14
—	—	—	—	—	—	—	—				—	—	—	—	8	−8	—	—	—	—	52	−51
3	*6*	*6*	—	*6*	*2*	—	*2*				*8*	*92*	*−84*	—	*8*	*−8*	*4*	*4*		*87*	*211*	*−124*
1	29	—	—	—	—	75	−75	26	—	26	25	45	−20	—	50	−50	86	28	58	287	287	
36	−17	45	10	35	94	—	94	1	26	−26	163	196	−32	—	—	—	73	59	14	796	796	
—	—	12	23	−12	—	—	—	48	—	48	—	8	−8	29	311	−282	52	—	51	458	458	
37	*11*	*56*	*33*	*23*	*94*	*76*	*19*	*75*	*26*	*48*	*188*	*249*	*−60*	*29*	*370*	*−341*	*211*	*87*	*124*	*1,541*	*1,541*	